Exhibit A

to

Complaint
for Patent Infringement

The ’723 Patent

US008855723B2

(12) **United States Patent**
Lynch, III

(10) **Patent No.: US 8,855,723 B2**
(45) **Date of Patent: Oct. 7, 2014**

(54) **TEMPORAL INCOMING COMMUNICATION NOTIFICATION MANAGEMENT**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 214 days.

(21) Appl. No.: **13/244,679**

(22) Filed: **Sep. 25, 2011**

(65) **Prior Publication Data**

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(51) **Int. Cl.**
H04M 1/00 (2006.01)

(52) **U.S. Cl.**
USPC **455/567**; 709/206

(58) **Field of Classification Search**
USPC 379/188, 93.01, 93.02, 210.02, 207.16, 379/142.04
See application file for complete search history.

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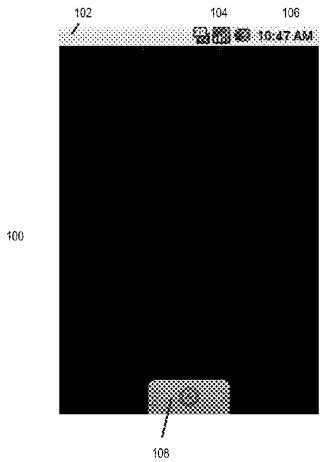
Primary Examiner — Maria El-Zoobi
(74) *Attorney, Agent, or Firm* — Christopher Paul Mitchell

(57) **ABSTRACT**

Smart phone computer app. The method may include, if a number of an incoming phone call or incoming text message is not temporally allowed, not allowing for notification of the incoming phone call or incoming text according to a normal notification routine and generating a notification of the incoming call or incoming text according to a password-protected masked notification routine of the smart phone, wherein the password-protected masked notification routine of the smart phone includes adding an indication of the incoming phone call or incoming text message to a password-protected phone log or message log of the smart phone and precludes immediately displaying the incoming phone call or incoming text message information on a display of the smart phone, and further precludes adding an indication of the incoming phone call or incoming text message to a default phone log or message log of the smart phone.

20 Claims, 31 Drawing Sheets



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Hidden Contacts v1.02 s60v3 s60.

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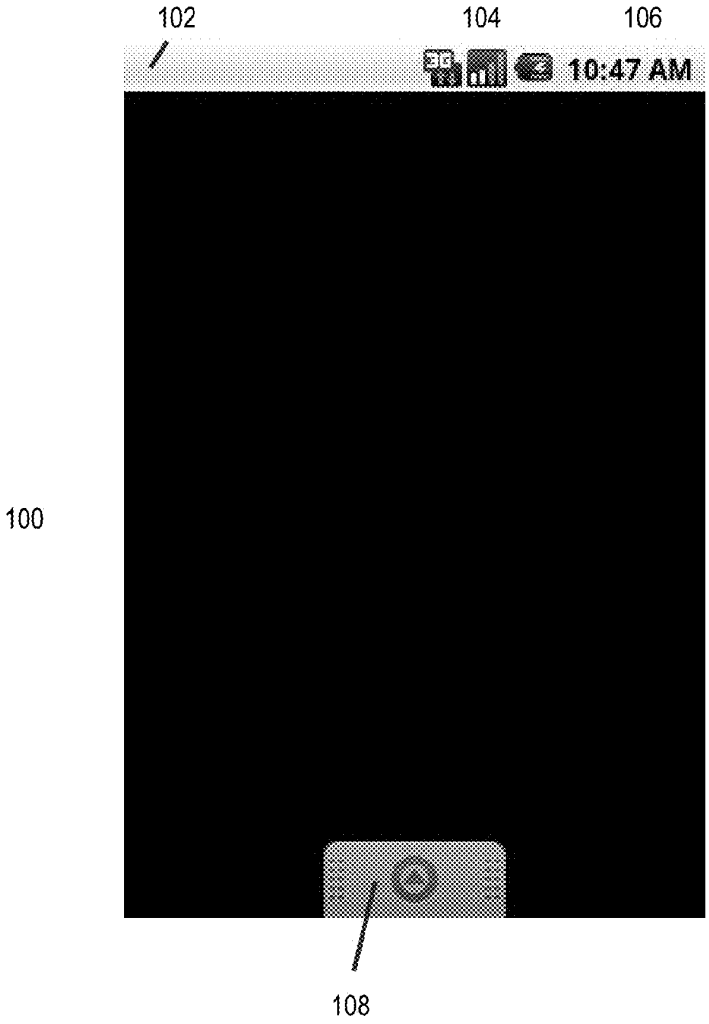


Figure 1

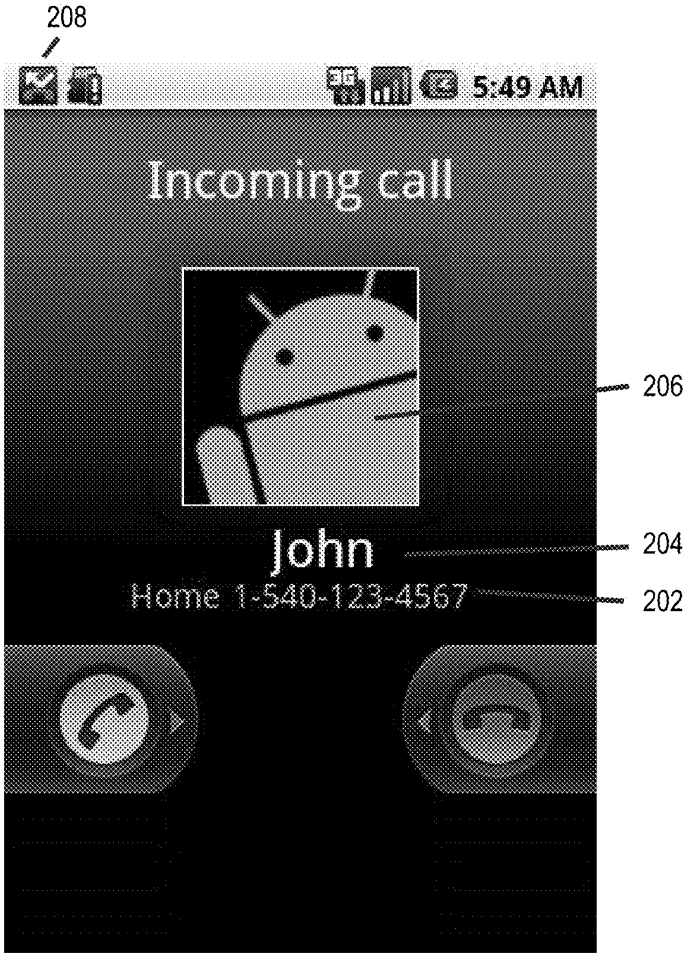


Figure 2

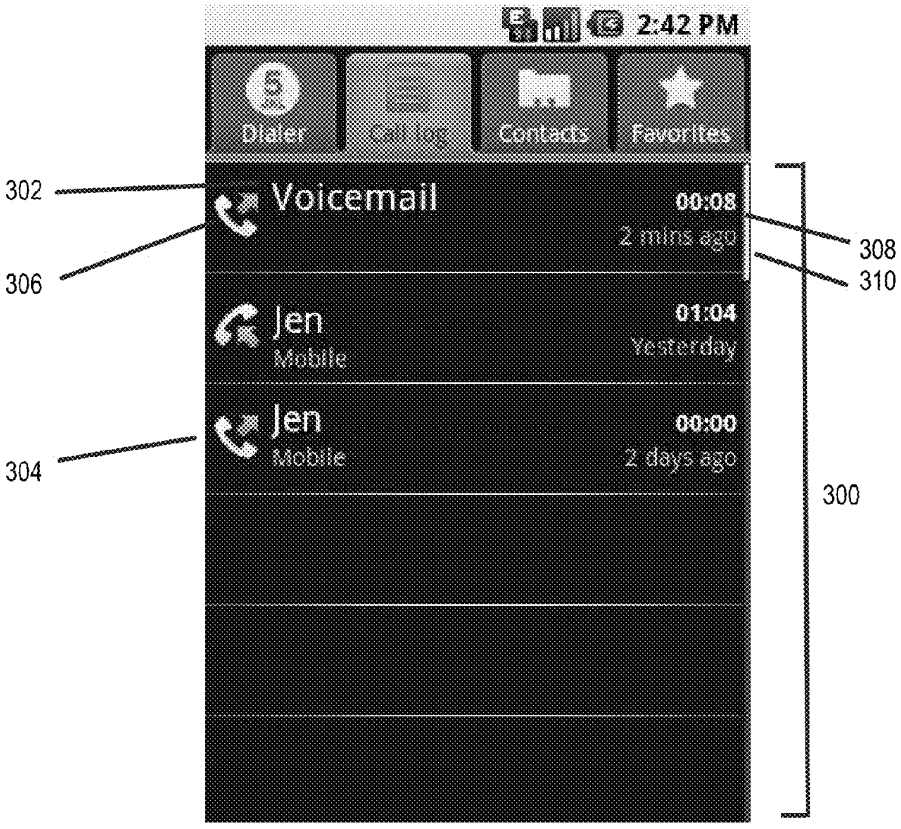

2:42 PM
Dialer
Call log
Contacts
Favorites
Voicemail
00:08
2 mins ago
Jen
Mobile
01:04
Yesterday
Jen
Mobile
00:00
2 days ago
302
306
304
308
310
300

Figure 3

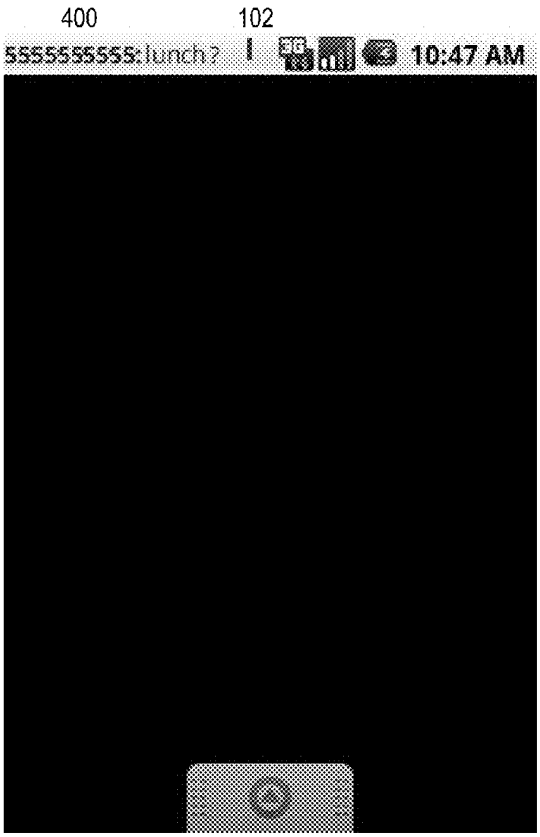


Figure 4

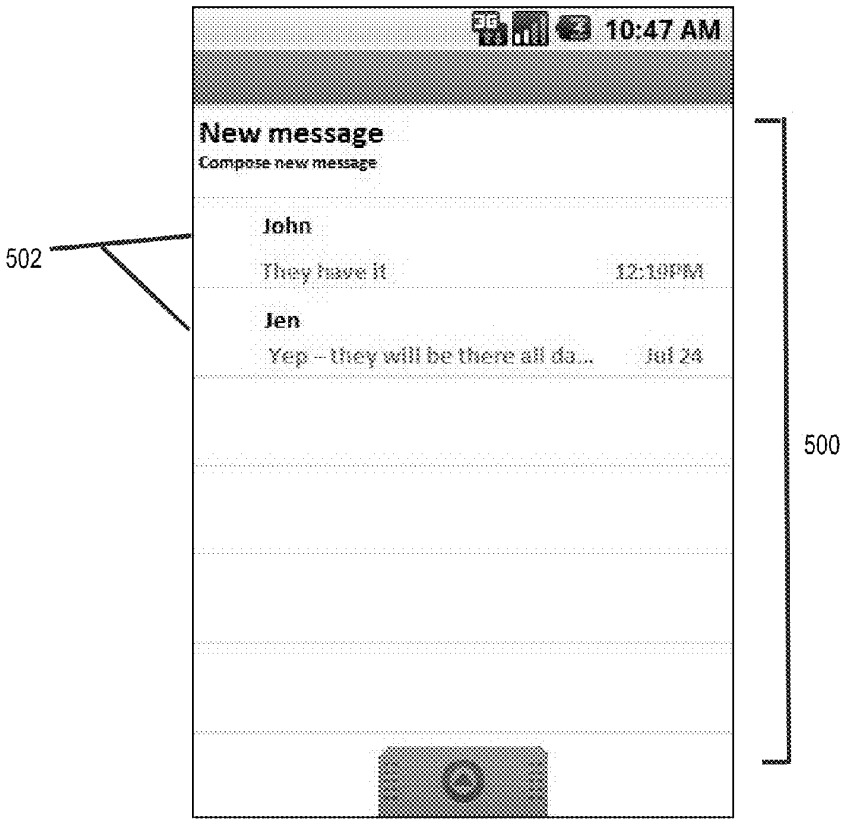

10:47 AM
New message
Compose new message
John
They have it
12:13PM
Jen
Yep – they will be there all da...
Jul 24
502
500

Figure 5

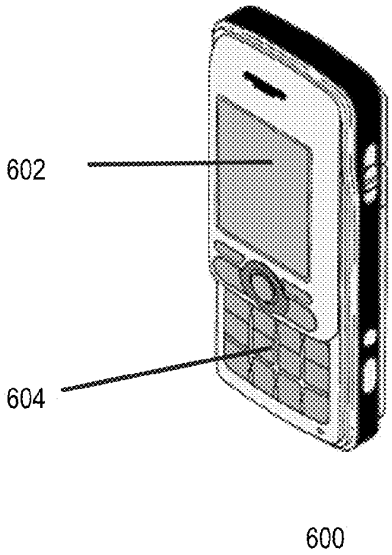


Figure 6

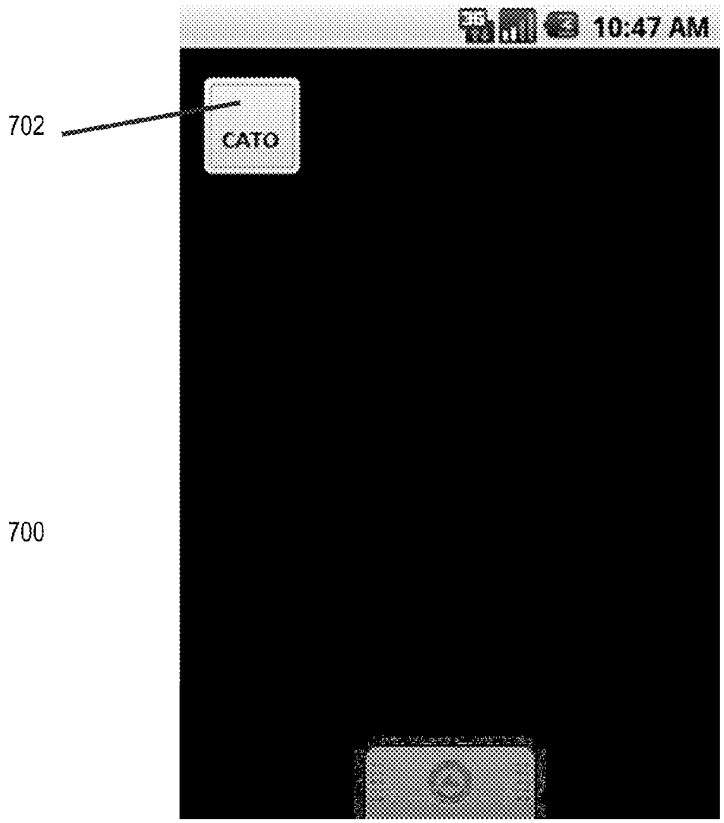


Figure 7

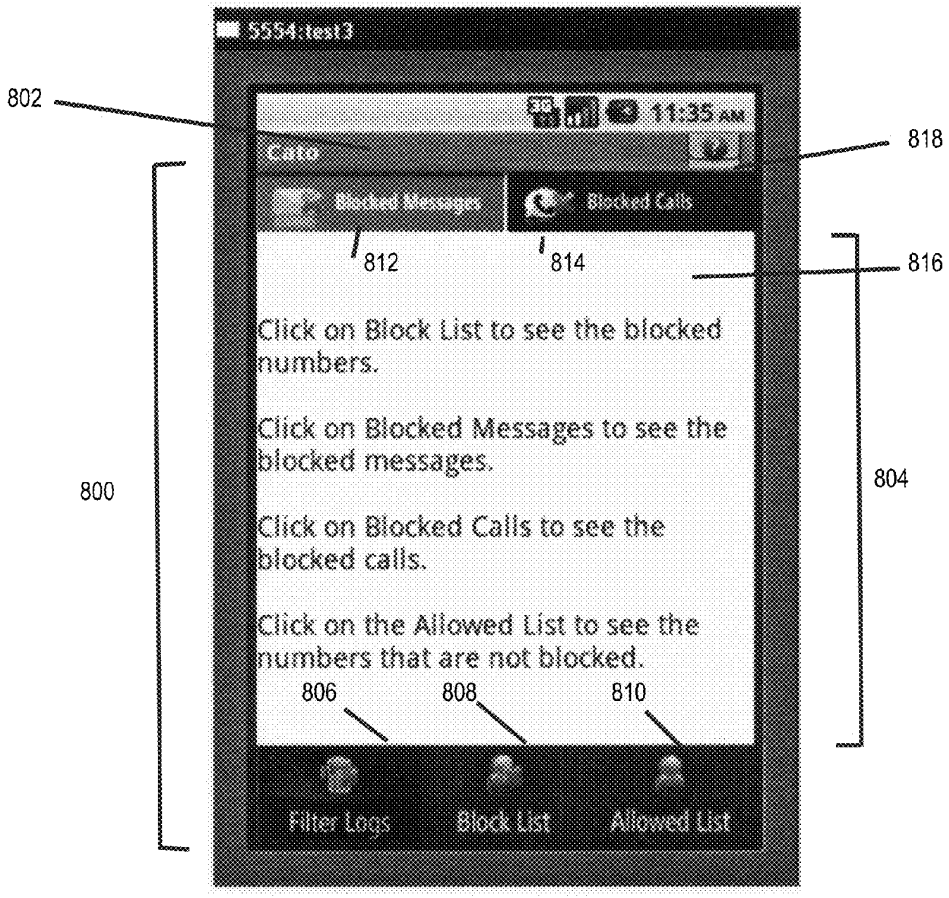

5554:test3
11:35 AM
Calls
Blocked Messages
Blocked Calls
Click on Block List to see the blocked numbers.
Click on Blocked Messages to see the blocked messages.
Click on Blocked Calls to see the blocked calls.
Click on the Allowed List to see the numbers that are not blocked.
Filter Logs
Block List
Allowed List
802
800
804
806
808
810
812
814
816
818

Figure 8

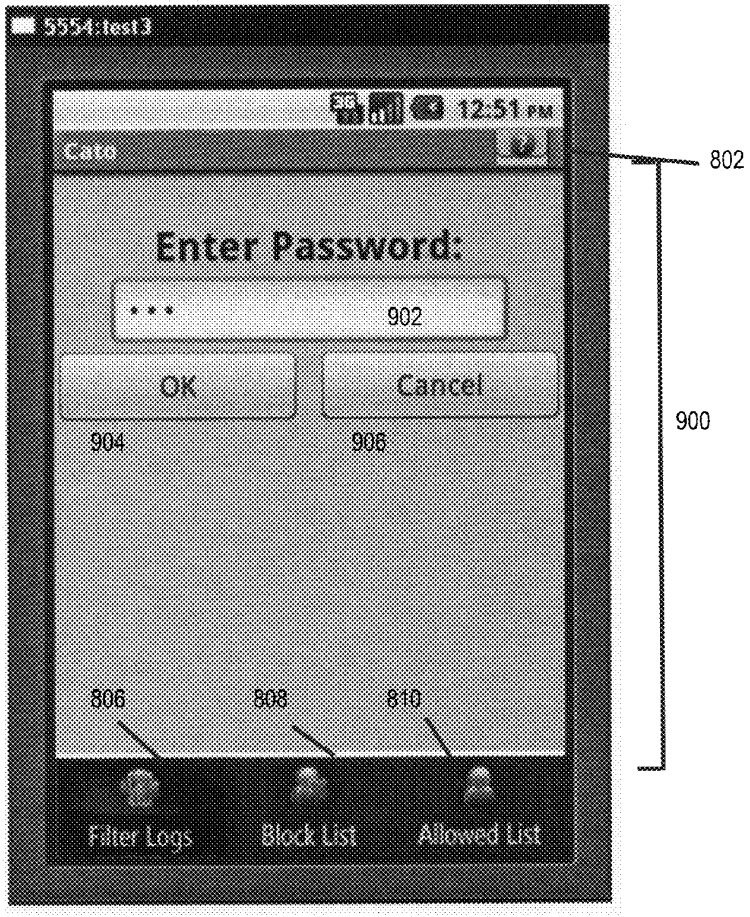

5554:test3
12:51 PM
Enter Password:
902
OK
Cancel
904
906
802
900
806
808
810
Filter Logs
Block List
Allowed List

Figure 9

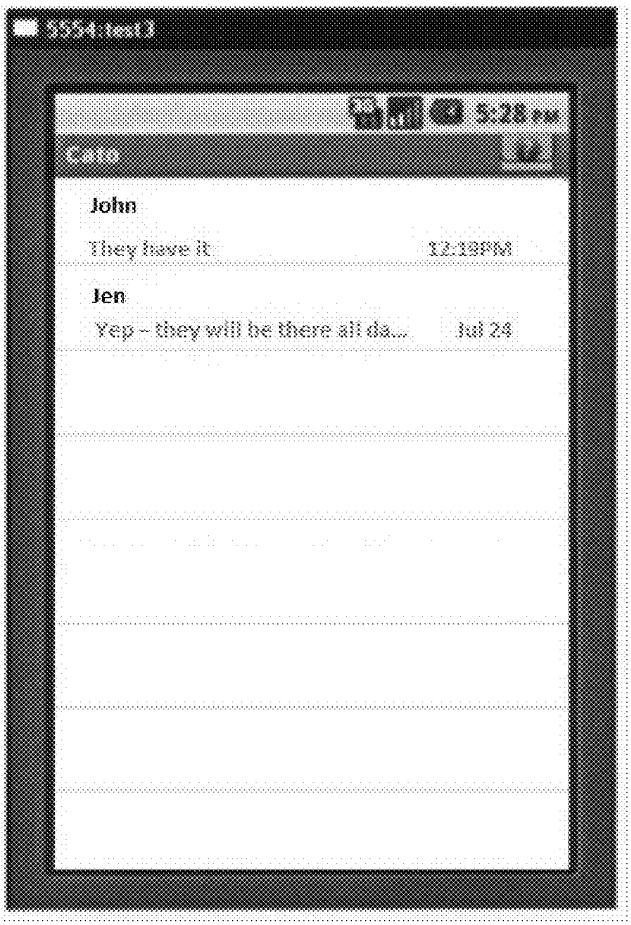

5:28 PM
Cate
John
They have it
12:18PM
Jen
Yep – they will be there all da...
Jul 24

Figure 10

5554:test 3
5:23 PM
Calls
Voicemail
00:08
2 mins ago
Jen
Mobile
01:04
Yesterday
Jen
Mobile
00:00
2 days ago

Figure 11

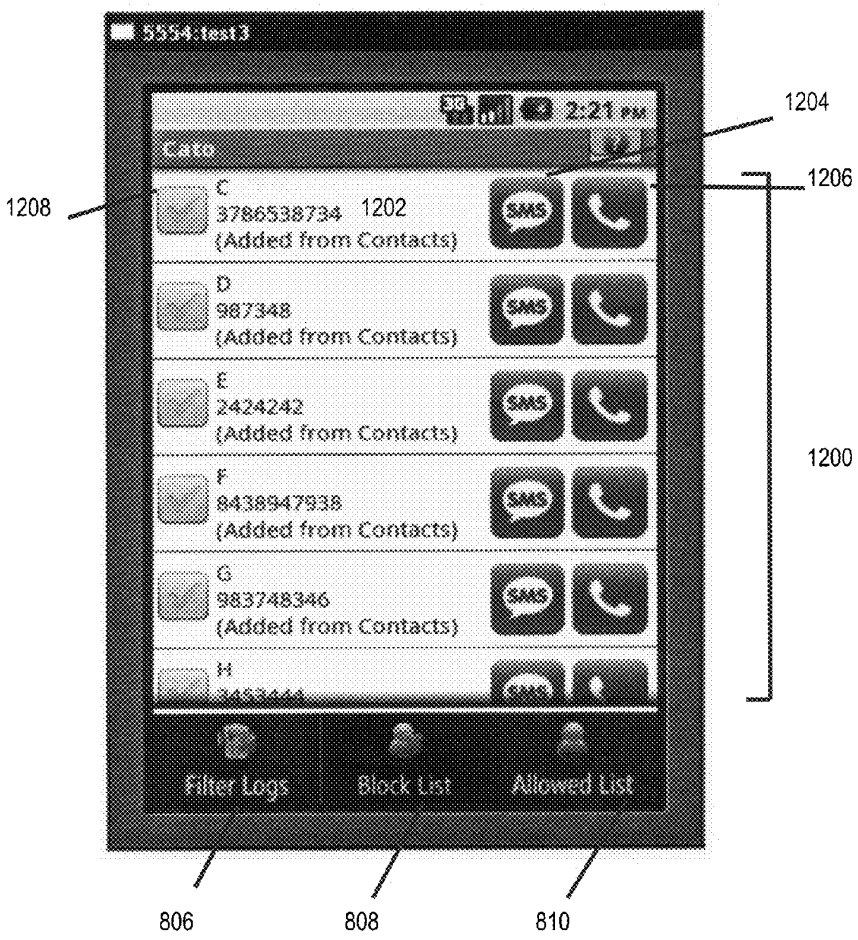

5554:test3
2:21 PM
Calls
C
3786538734
(Added from Contacts)
D
987348
(Added from Contacts)
E
2424242
(Added from Contacts)
F
8438947938
(Added from Contacts)
G
983748346
(Added from Contacts)
H
Filter Logs
Block List
Allowed List
1202
1204
1206
1208
1200
806
808
810

Figure 12

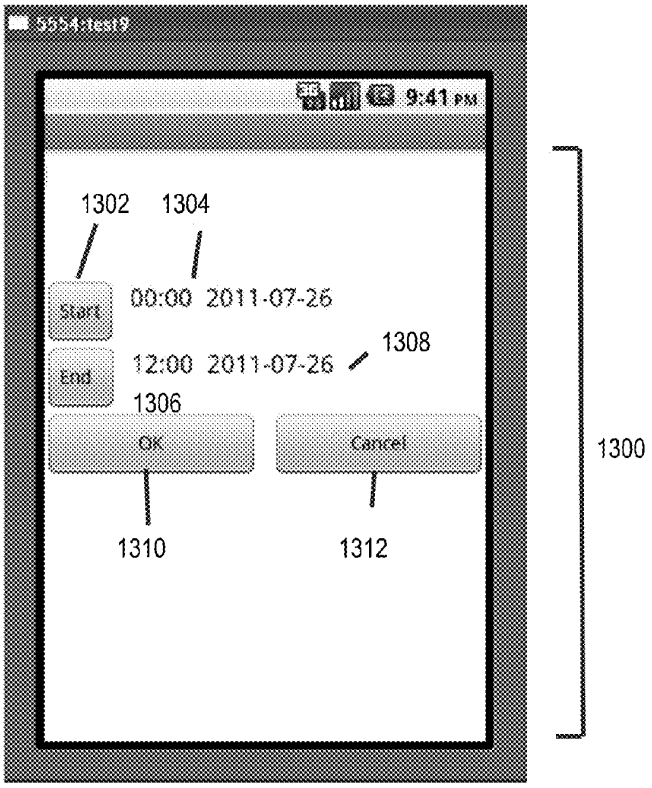

9:41 PM
1302
1304
Start
00:00 2011-07-26
End
12:00 2011-07-26
1308
1306
OK
Cancel
1310
1312
1300

Figure 13

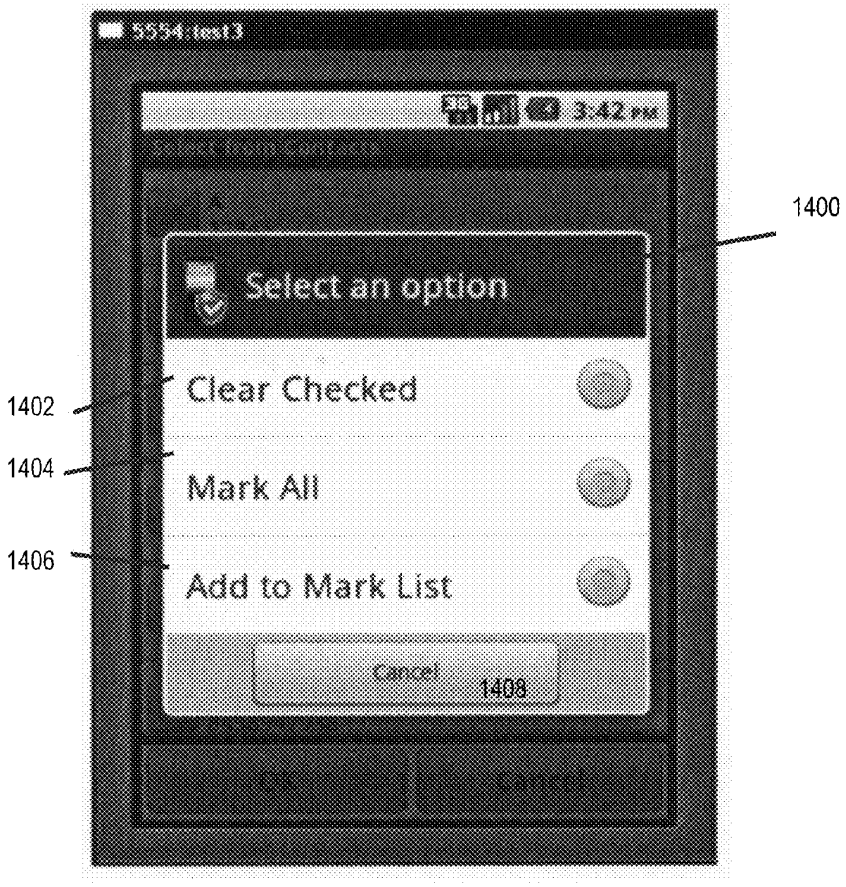

5554: test3
3:42 PM
1400
Select an option
Clear Checked
Mark All
Add to Mark List
Cancel
1408
1402
1404
1406

Figure 14

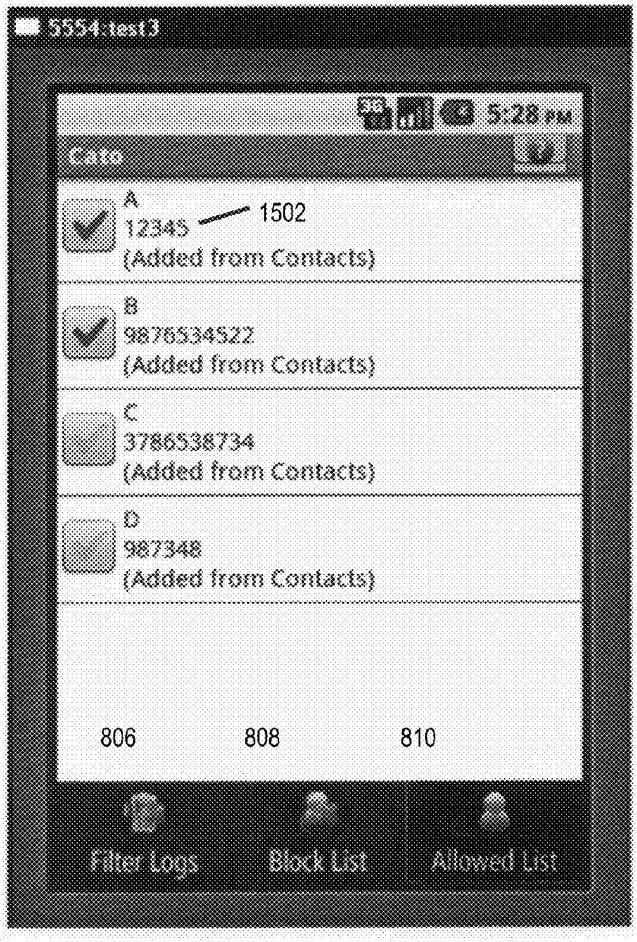

1500
5554 test3
5:28 PM
Cats
A
12345
1502
(Added from Contacts)
B
9876534522
(Added from Contacts)
C
3786538734
(Added from Contacts)
D
987348
(Added from Contacts)
806
808
810
Filter Logs
Block List
Allowed List

Figure 15

5554:test3
5:49 PM
Select an option
Move Marked to Block List
Clear All
Cancel
1600
1602
1604
1606

Figure 16

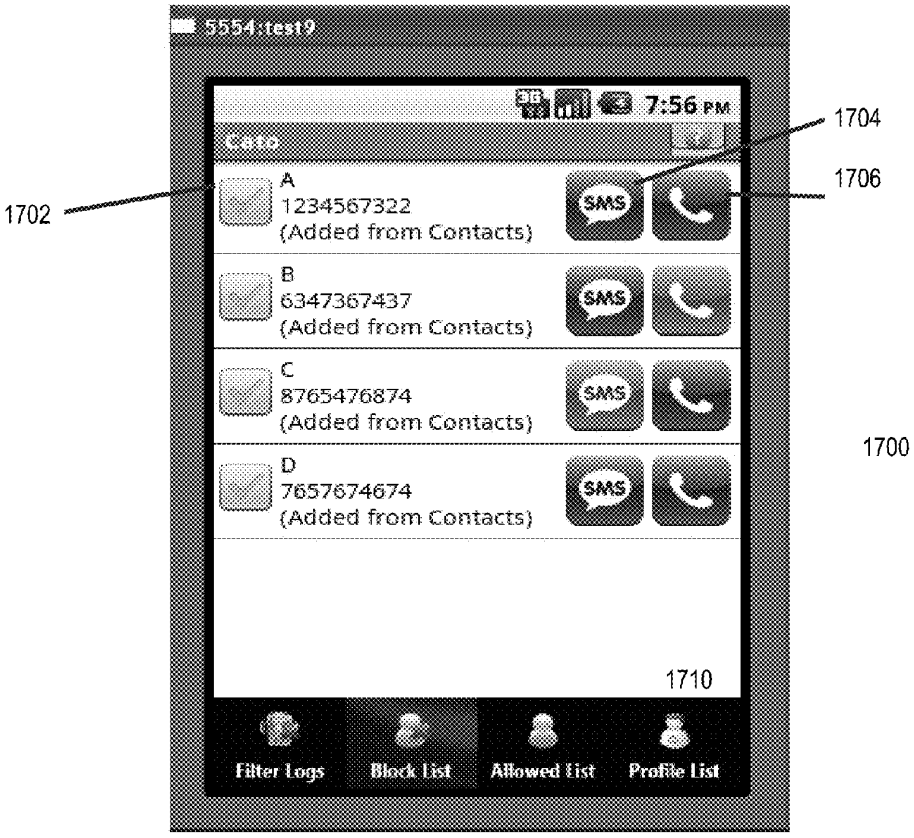

5554:test9
7:56 PM
Calls
A
1234567322
(Added from Contacts)
B
6347367437
(Added from Contacts)
C
8765476874
(Added from Contacts)
D
7657674674
(Added from Contacts)
SMS
1710
Filter Logs
Block List
Allowed List
Profile List
1702
1704
1706
1700

Figure 17

5554:test9
8:07 PM
Deleting Conformation
The entry will be deleted from Block List.
Yes
No
1800
1802
1804

Figure 18

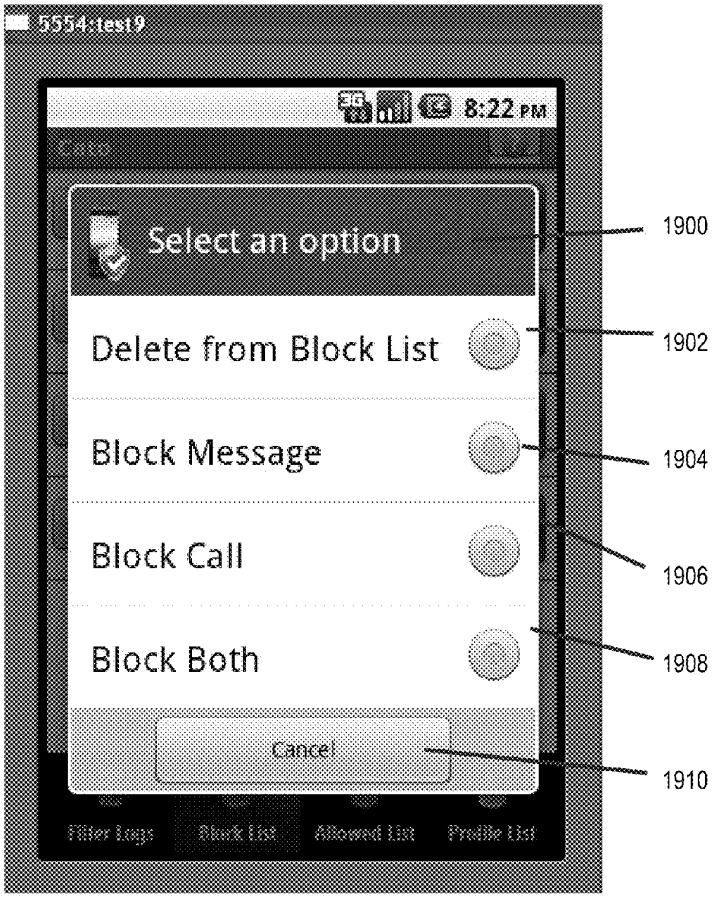

5554:test9
8:22 PM
Select an option
Delete from Block List
Block Message
Block Call
Block Both
Cancel
Filter Logs
Block List
Allowed List
Profile List
1900
1902
1904
1906
1908
1910

Figure 19

5554:test9
8:43 PM
Select an option
Delete Marked from Block List
Block Message for Marked
Block Call for Marked
Block Both for Marked
Cancel
Filter Logs
Block List
Allowed List
Profile List
2000
2002
2004
2006
2008
2010

Figure 20

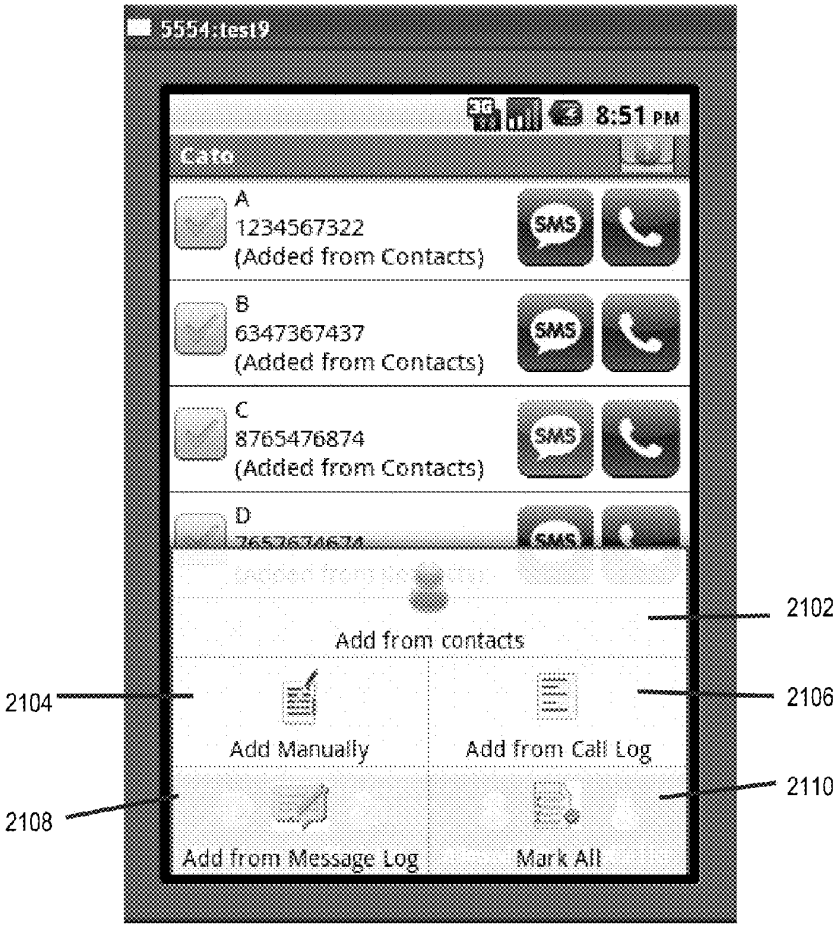

5554:test9
8:51 PM
Cate
A
1234567322
(Added from Contacts)
B
6347367437
(Added from Contacts)
C
8765476874
(Added from Contacts)
D
SMS
Add from contacts
Add Manually
Add from Call Log
Add from Message Log
Mark All
2102
2104
2106
2108
2110

Figure 21

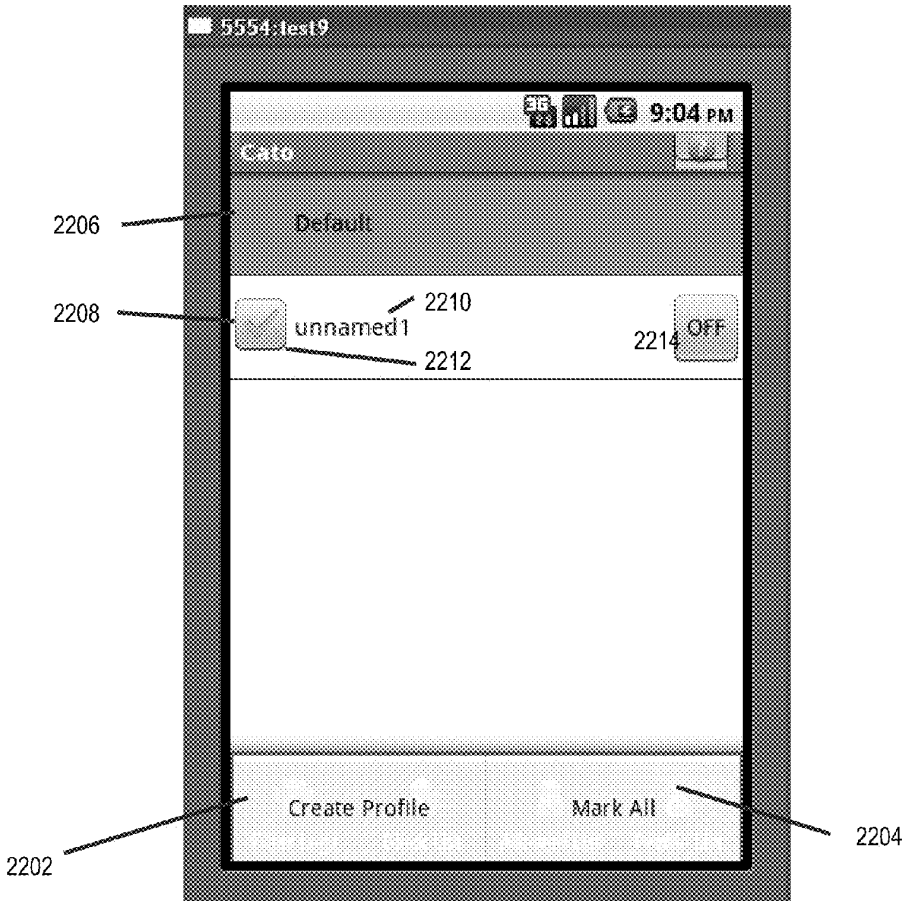

5554:test9
9:04 PM
Cats
Default
unnamed1
OFF
Create Profile
Mark All
2202
2204
2206
2208
2210
2212
2214

Figure 22

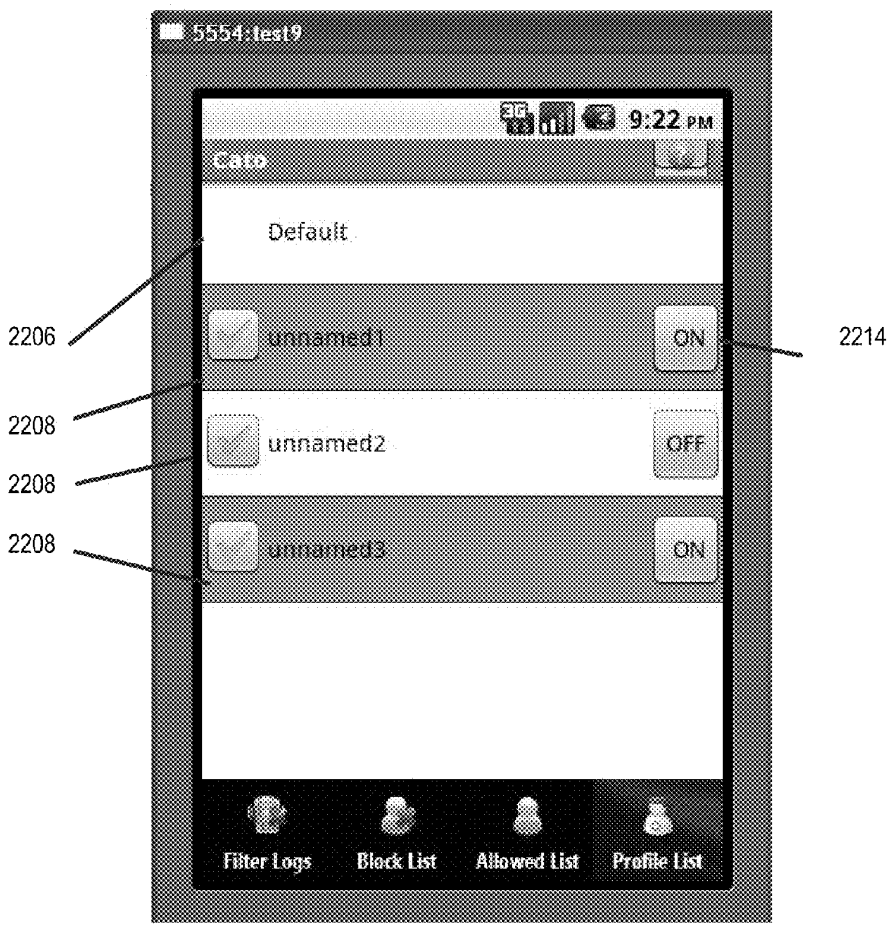

5554:test9
9:22 PM
Default
unnamed1
ON
unnamed2
OFF
unnamed3
ON
Filter Logs
Block List
Allowed List
Profile List
2206
2208
2208
2208
2214

Figure 23

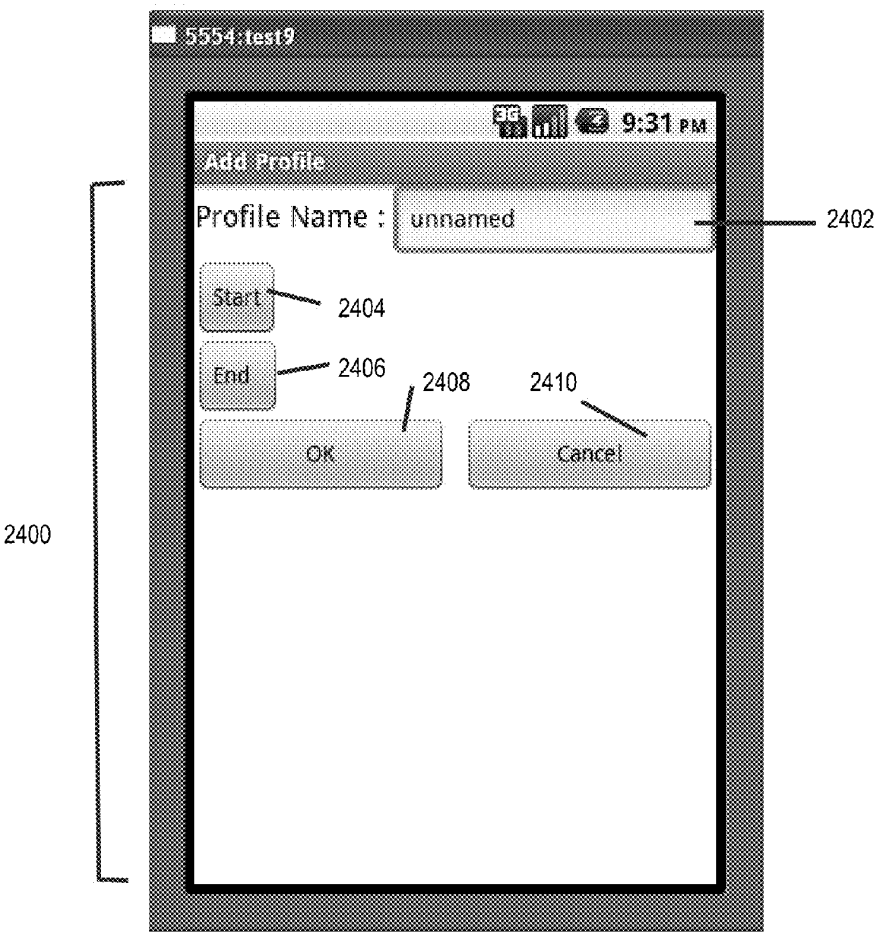

5554:test9
9:31 PM
Add Profile
Profile Name :
unnamed
2402
Start
2404
End
2406
2408
2410
OK
Cancel
2400

Figure 24

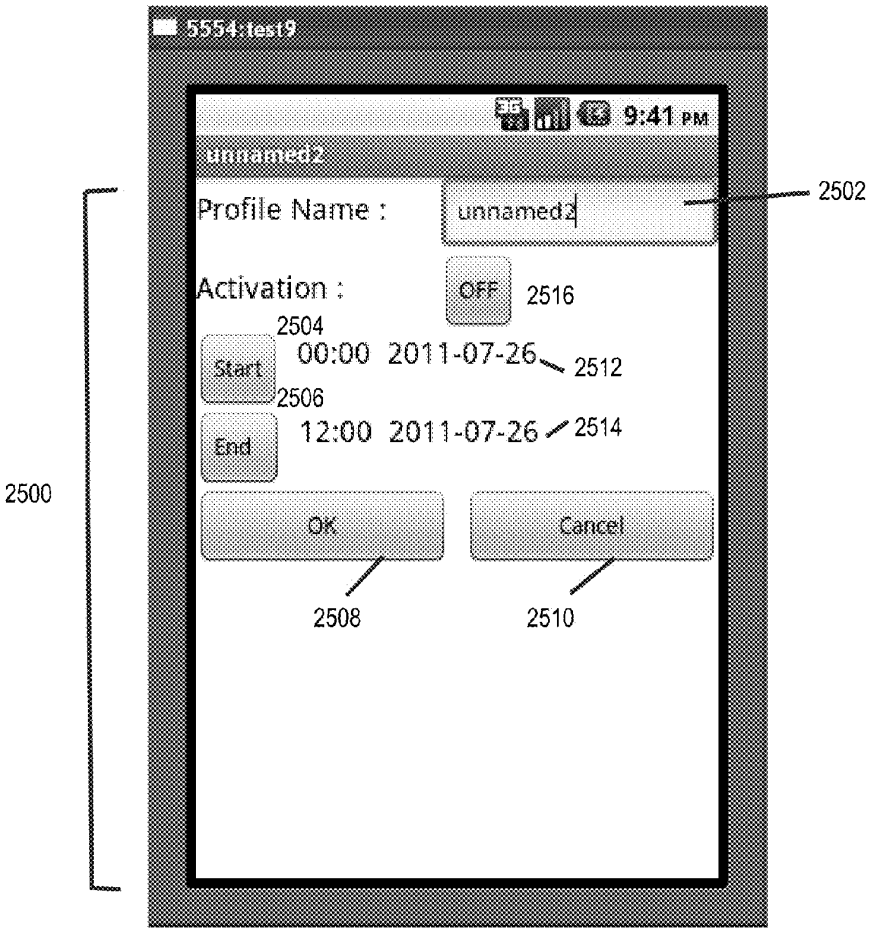

5554:test9
9:41 PM
unnamed2
Profile Name :
unnamed2
2502
Activation :
OFF
2516
2504
Start
00:00 2011-07-26
2512
2506
End
12:00 2011-07-26
2514
2500
OK
Cancel
2508
2510

Figure 25

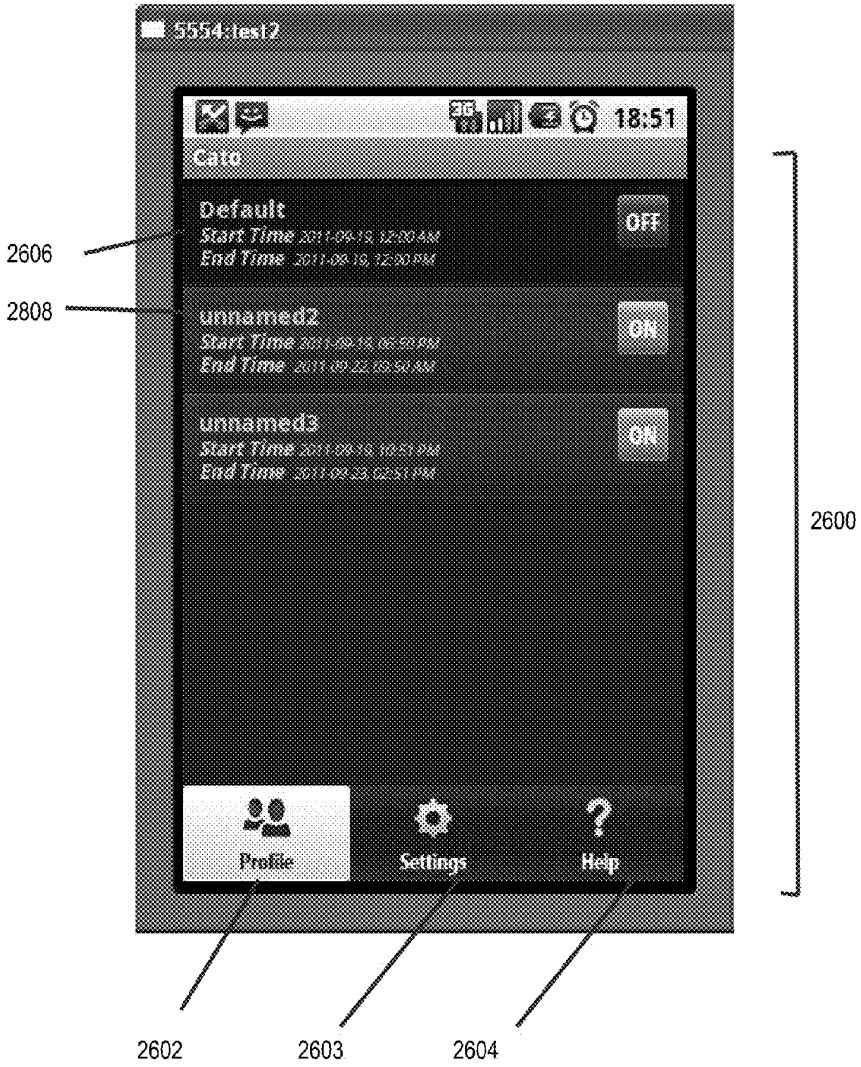

5554:test2
18:51
Cate
Default
Start Time
End Time
OFF
unnamed2
Start Time
End Time
ON
unnamed3
Start Time
End Time
ON
Profile
Settings
Help
2606
2808
2600
2602
2603
2604

Figure 26

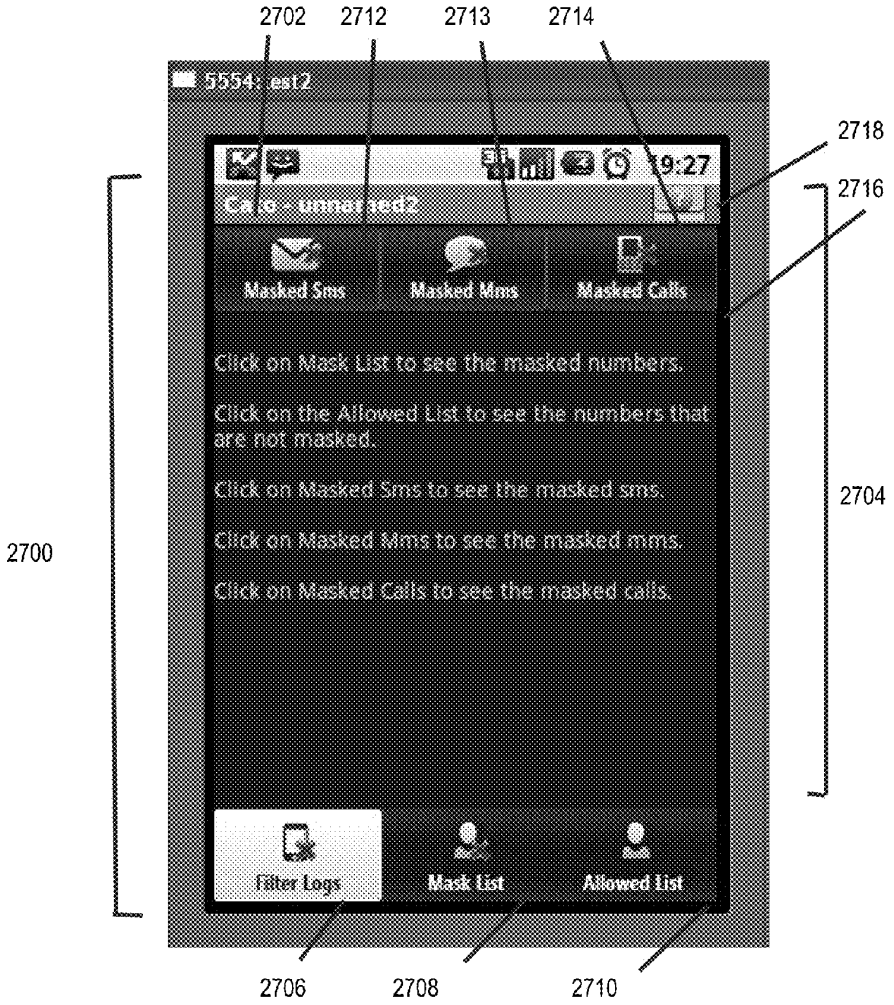

2702
2712
2713
2714
2718
2716
2704
2700
5554: est2
9:27
Masked Sms
Masked Mms
Masked Calls
Click on Mask List to see the masked numbers.
Click on the Allowed List to see the numbers that are not masked.
Click on Masked Sms to see the masked sms.
Click on Masked Mms to see the masked mms.
Click on Masked Calls to see the masked calls.
Filter Logs
Mask List
Allowed List
2706
2708
2710

Figure 27

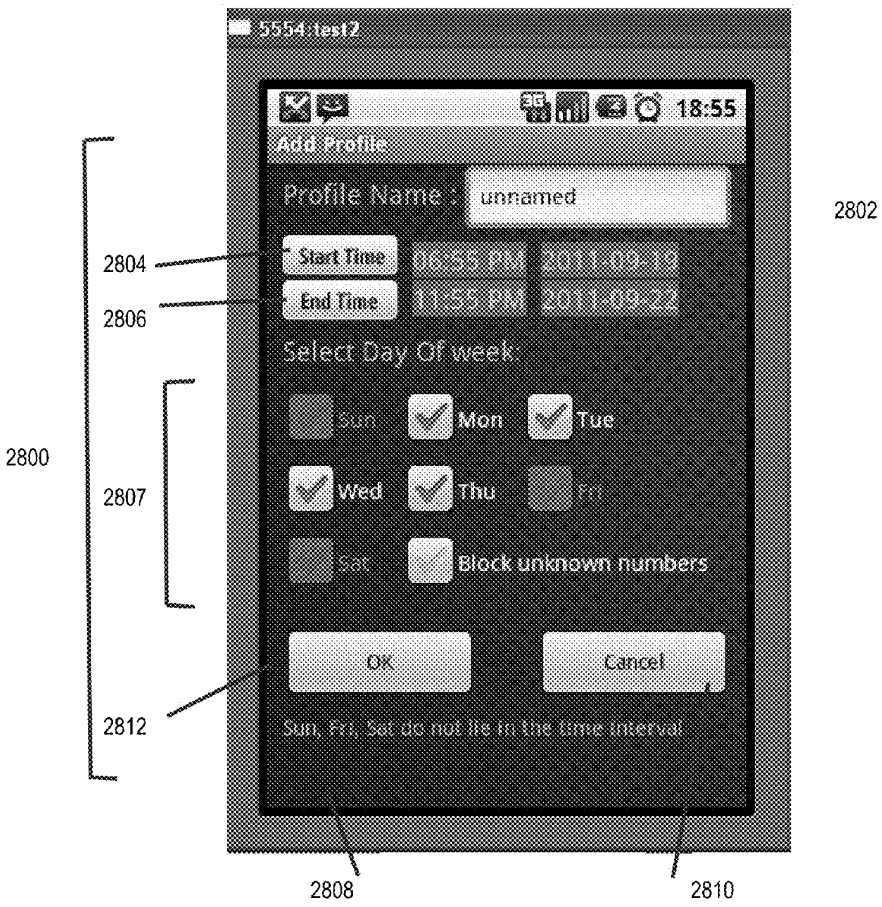

5554:test2
18:55
Add Profile
Profile Name :
unnamed
Start Time
End Time
Select Day Of week:
Sun
Mon
Tue
Wed
Thu
Fri
Sat
Block unknown numbers
OK
Cancel
Sun, Fri, Sat do not lie in the time interval
2800
2802
2804
2806
2807
2808
2810
2812

Figure 28

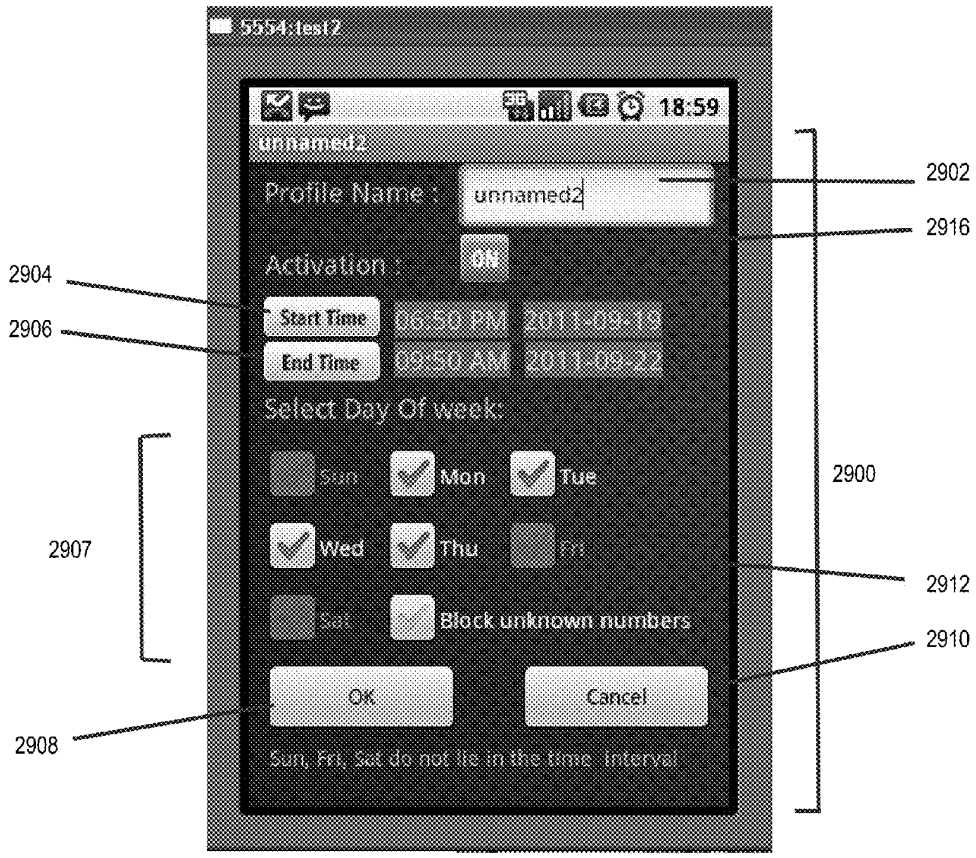

5554:test2
18:59
unnamed2
Profile Name :
unnamed2
Activation :
ON
Start Time
End Time
Select Day Of week:
Sun
Mon
Tue
Wed
Thu
Fri
Sat
Block unknown numbers
OK
Cancel
Sun, Fri, Sat do not lie in the time interval
2902
2916
2904
2906
2900
2907
2912
2910
2908

Figure 29

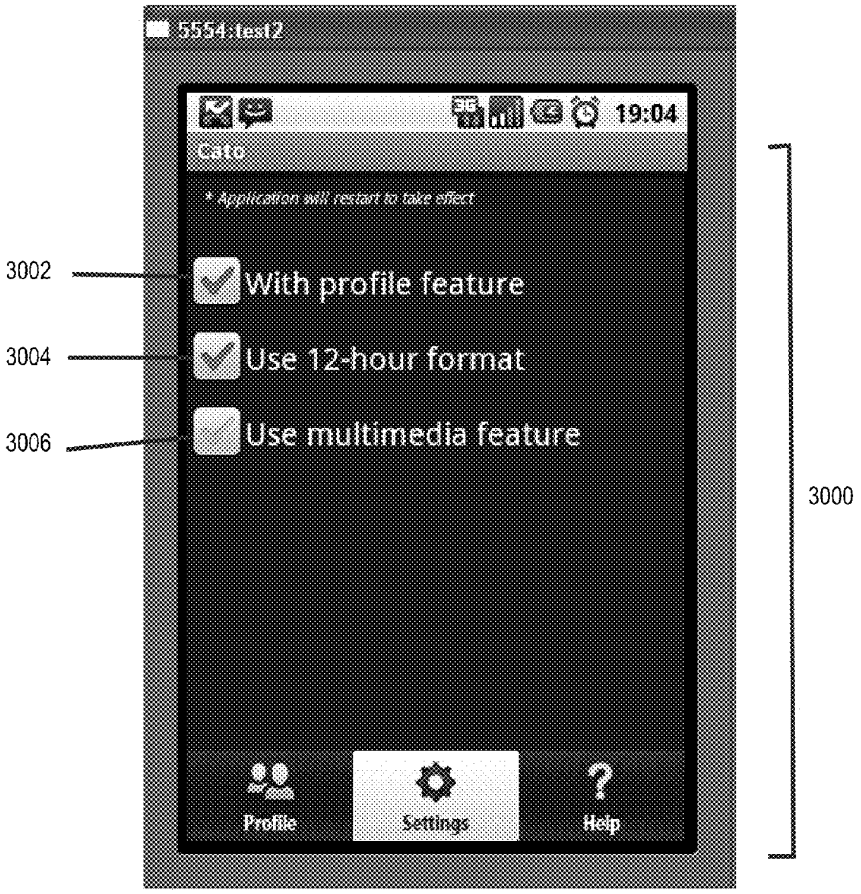

5554:test2
19:04
Calc
* Application will restart to take effect.
With profile feature
Use 12-hour format
Use multimedia feature
Profile
Settings
Help
3002
3004
3006
3000

Figure 30

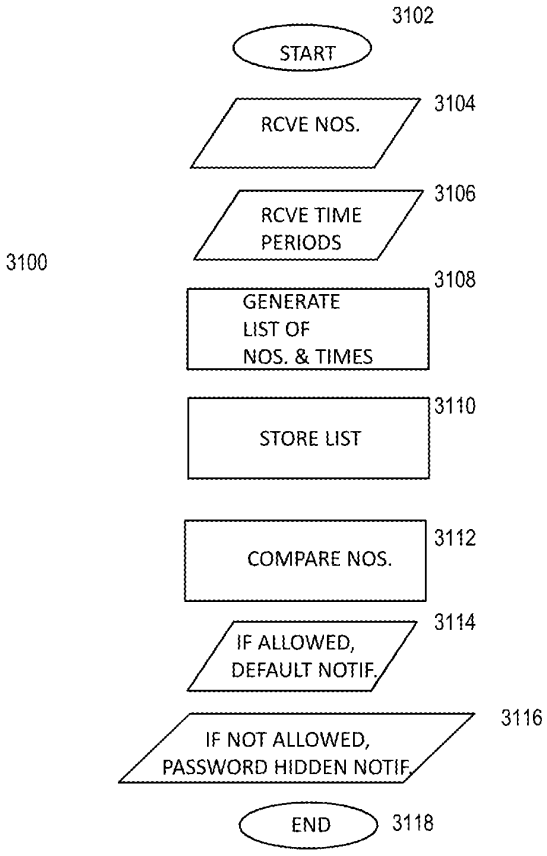

3100
3102
START
3104
RCVE NOS.
3106
RCVE TIME PERIODS
3108
GENERATE LIST OF NOS. & TIMES
3110
STORE LIST
3112
COMPARE NOS.
3114
IF ALLOWED, DEFAULT NOTIF.
3116
IF NOT ALLOWED, PASSWORD HIDDEN NOTIF.
END
3118

Figure 31

TEMPORAL INCOMING COMMUNICATION NOTIFICATION MANAGEMENT

BACKGROUND

1. Field

Embodiments of the present invention relate generally to smartphones. More particularly, embodiments of the present invention relate to temporal incoming communication notification management for smartphones.

2. Description of the Related Art

Smart phones are a part of contemporary life. While capable of traditional voice calls, smart phones offer considerable additional functionality. For example, smart phones can be used to send and receive text messages, surf the Internet, and manage a personal calendar. FIG. **1** is a schematic representation of an exemplary home screen **100** displayed on a display of an exemplary smartphone. The exemplary home screen **100** may be displayed with a notification bar **102** that may communicate information such as phone signal strength via a phone signal strength indicator **104** and the current time **106**. The exemplary home screen **100** may also be displayed with a control **108** to launch a menu of, for example, software applications ("apps") executable by the smart phone.

Even in conjunction with traditional voice calls, smart phones offer extended capabilities relative to their land-based predecessors. For example, according to a default notification routine of a smartphone, incoming phone calls are visually indicated on a display of the smart phone. FIG. **2** is a schematic representation of an exemplary visual indication **200** of an incoming call on the smartphone display. As shown in FIG. **2**, the exemplary visual indication includes, among other items, an indication of the phone number **202** of an incoming phone call (and data associated therewith such as a caller's name **204** or picture/icon **206**). As further shown in FIG. **2**, the notification bar **102** also includes a missed incoming call notification **208** indicating another earlier phone call that was not answered. Incoming phone calls may be additionally indicated with a ring tone or alternatively the smartphone may vibrate to quietly indicate the call. Incoming calls, whether answered or not, are be automatically logged in a call log making it easier for a user to see calls received by the smart phone. FIG. **3** is a schematic representation of an exemplary call log **300** of the smartphone of FIG. **1**. As shown in FIG. **3**, the exemplary call log **300** includes a list of the phone numbers (or data associated therewith such as names **302**), duration **308**, and timestamp **310** for answered calls **304**, missed calls, and outgoing calls **306**.

According to the default notification routine of the smart phone, text messages are handled similarly to voice calls. Incoming text messages may be visually indicated on the display of the smart phone. FIG. **4** is a schematic representation of an exemplary visual indication **400** of an incoming text message on the smartphone display. As shown in FIG. **4**, the exemplary visual indication **400** of the incoming text message is displayed as temporarily appearing text in the notification bar **102**. Thereafter, a text message notification such as a message icon (similar to the missed incoming call notification **208**) is displayed on the notification bar **102**. Incoming text messages may also be audibly indicated with an audible alert or alternatively the phone may vibrate to quietly indicate the incoming text message. Incoming text messages are automatically logged to a message log from which a user may access the text message for review and response (i.e., messages are placed within or made accessible from an inbox). FIG. **5** is a schematic representation of an exemplary message log **500** of the smart phone of FIG. **1**. The exemplary message log **500** includes a list of both unread text messages (i.e., new text messages) and read text messages **502**. Upon selecting a text message **502**, a user may read the entire contents of that text message **502** and may respond thereto.

Despite the extended notification capabilities of smart phones, additional notification options are desirable.

BRIEF SUMMARY

According to an aspect of the invention, a method of a smart phone including a processor, a memory coupled to the processor, and a display. The method may include receiving into a user interface of the smart phone, indications of temporally authorized or unauthorized phone numbers, receiving into the user interface of the smart phone, indications of time periods during which the temporally authorized or unauthorized phone numbers are temporally authorized or unauthorized, generating a list of temporally authorized or unauthorized phone numbers and time periods based on said received indications of temporally authorized or unauthorized phone numbers and time periods, storing the list of temporally authorized or unauthorized phone numbers and time periods in the memory of the smart phone, and comparing, using instructions executed by the processor of the smart phone, phone numbers and times of incoming phone calls and incoming text messages against the list of temporally authorized or unauthorized phone numbers and time periods. If a number of an incoming phone call or incoming text message and is temporally allowed, the method may include allowing for notification of the incoming phone call or incoming text messages according to a default notification routine of the smart phone. If the number of the incoming phone call or incoming text message is not temporally allowed, the method may include not allowing for notification of the incoming phone call or incoming text according to the normal notification routine and generating a notification of the incoming call or incoming text according to a password-protected masked notification routine of the smart phone. The default notification routine of the smart phone may include immediately displaying incoming phone call or incoming text message information on the display of the smart phone and adding an indication of the incoming phone call or incoming text message to a default phone log or message log of the smart phone. The password-protected masked notification routine of the smart phone may include adding an indication of the incoming phone call or incoming text message to a password-protected phone log or message log of the smart phone and preclude immediately displaying the incoming phone call or incoming text message information on the display of the smart phone, and further preclude adding an indication of the incoming phone call or incoming text message to a default phone log or message log of the smart phone.

The foregoing and other aspects will become apparent from the following detailed description when considered in conjunction with the accompanying drawing figures.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a schematic representation of an exemplary home screen **100** displayed on a display of an exemplary smartphone.

FIG. **2** is a schematic representation of an exemplary visual indication **200** of an incoming call on the smartphone display.

FIG. **3** is a schematic representation of an exemplary call log **300** of the smartphone of FIG. **1**.

FIG. **4** is a schematic representation of an exemplary visual indication **400** of an incoming text message on the smartphone display.

FIG. **5** is a schematic representation of an exemplary message log **500** of the smart phone of FIG. **1**.

FIG. **6** is a schematic representation of an exemplary smartphone **600**.

FIG. **7** is a schematic representation of an exemplary home screen **700** displayed on a display of the smartphone **600** of FIG. **6**.

FIG. **8** is a schematic representation of a main user interface **800** of a temporal incoming communication notification management app according to an exemplary embodiment of the present invention.

FIGS. **9-16** are schematic representations of screens and dialogs of the temporal incoming communication notification management app of claim **8**.

FIGS. **17-25** are schematic representations of screens and dialogs of a temporal incoming communication notification management app according to another exemplary embodiment of the present invention.

FIGS. **26-30** are schematic representations of screens of a temporal incoming communication notification management app according to another exemplary embodiment of the present invention.

FIG. **31** is a schematic representation of a method of a smartphone according to an exemplary embodiment of the present invention.

DETAILED DESCRIPTION

Reference will now be made in detail to embodiments of the present invention, examples of which are illustrated in the accompanying drawings, wherein like reference numerals refer to the like elements throughout. The embodiments are described below to explain the present invention by referring to the figures.

"As used in the description of this application, the terms "a", "an" and "the" may refer to one or more than one of an element (e.g., item or act). Similarly, a particular quantity of an element may be described or shown while the actual quantity of the element may differ. The terms "and" and "or" may be used in the conjunctive or disjunctive sense and will generally be understood to be equivalent to "and/or". Elements from an embodiment may be combined with elements of another. No element used in the description of this application should be construed as critical or essential to the invention unless explicitly described as such. Further, when an element is described as "connected," "coupled," or otherwise linked to another element, it may be directly linked to the other element, or intervening elements may be present."

For a variety of reasons, a user of a smartphone may desire certain incoming phone calls and text messages not to be handled according to a default notification routine of the smartphone (or conversely that only certain incoming phone calls or text messages are handled according to the default notification routine). While call blocking, message filtering, and even some examples of contact privacy have been disclosed in the art, a user may desire temporal management of incoming phone calls and text messages.

In one example, a user (e.g., an undercover police officer) may during a time period be in certain company (e.g., with a criminal suspect) that the user may not want to know of phone calls or text messages from a particular entity (e.g., a phone call from the police station). Simply turning the ringer of the smartphone off may not be enough. For example, even if the ringer is off, the criminal suspect may get the opportunity to browse the phone and may see the police station in the undercover police officer's call log.

In another example, a user may not wish to receive even notifications of phone calls or text messages with the exception of calls or text messages from a specific person (e.g., the user's babysitter) during a time period (e.g., while on a date with the user's spouse). If the user leaves the phone off, the babysitter cannot get through. If the user leaves the phone on, the user may still receive notifications of phone calls or text messages either by, for example, a visual indication on the screen, or by reviewing a call log to check for missed calls from the babysitter. While such may seem minor, such an unwanted notification may cause stress and anxiety, and may negatively impact the user's date. For example, if a notification indicates the user's work place is trying to reach the user, such a notification may cause stress and anxiety.

In yet another example, an entity (e.g., a corporation) may desire for users of entity-provided phones (e.g., employees) only to receive phone calls and text messages from particular people (e.g., other employees) during one time period (e.g., during work hours). The entity may desire for users not to receive any phone calls or text messages during another time period (e.g., during non-work hours). If the entity requests users to turn in their phones at the end of the day, keeping track of phones may become burdensome. Further, limiting users of entity-provided phones to receive phone calls and text messages from particular people may be difficult.

Accordingly, temporal management of incoming phone calls and text messages according to a password-protected masked notification routine is needed for smart phones. That is, incoming calls and texts may be filtered to either be delivered according to a default notification routine or according to the password-protected masked notification routine. Filtering may be based on a time and date and on a phone number of an incoming phone call or text message.

FIG. **6** is a schematic representation of an exemplary smartphone **600**. The smart phone may include a display **602** (that may function as a user interface such as a touchscreen), a user interface **604**, a processor, a memory coupled to the processor, a transmitter, and a receiver. The smartphone described herein may be a smart phone running an Android-based operating system from Google Inc. The smartphone may be any appropriate device. For example, the smartphone may be an IPhone smartphone from Apple Inc. or a BlackBerry smartphone from Research In Motion Limited. Further, because the smartphone **600** is described in the context of an Android-based operating system, the embodiments are described with reference to, for example, activities. The principles and spirit of the invention may be implemented in alternative structures, modules, or the like, now known or later developed, causing a computing device to operate according to computer program instructions.

FIG. **7** is a schematic representation of an exemplary home screen **700** displayed on a display of the smartphone **600** of FIG. **6**. The home screen **700** may include an icon **702** for launching a temporal incoming communication notification management app according to an embodiment of the present invention. Alternatively, a specific key sequence (e.g., inputting a specific sequence of characters) or screen swipe pattern (e.g., moving a finger in a specific pattern on the touch screen) could be used to launch the temporal incoming communication notification management app. In a further exemplary embodiment, an icon for launching the temporal incoming communication notification management app may periodically (e.g., monthly or manually) change in appearance so as to be less detectable of the app to people other than the user.

The user may, for example, pay a fee to receive automatically changing icons or new icons. In yet another exemplary embodiment, a combination of changing icons, specific key sequences, and screen swipes may be used in an attempt to lessen the detectability of the app to people other than the user. The incoming communication notification management app may be stored in the memory of the smartphone **600**. The memory of the smart phone may include, for example, a built-in memory device or an removable memory device. In this exemplary embodiment, the incoming communication notification management app may run entirely on the smartphone **600**.

During the launch of the temporal incoming communication notification management app, the user may be prompted to enter a password which may be checked similarly as described below with respect to the password for logs activity. During the launch of the temporal incoming communication notification management app, a splash file may be displayed, for example, a splash screen may be displayed and contacts from the smartphone's contact list may be retrieved. The temporal incoming communication notification management app may include a database. The database may include a masked list table, a messages received table, a calls received table, a password table, and an allowed list table. When the contacts from the smartphone's contact list are retrieved, the masked list table and allowed list table may be synchronized with the contacts from the smartphone's contact list. The launch may complete with the start of a main activity of the temporal incoming communication notification management app.

In the main activity, a main user interface may be displayed. FIG. **8** is a schematic representation of a main user interface **800**. The main user interface **800** may include a title bar **802**, a main screen **804**, a filter logs tab **806**, a blocked (or "masked") list tab **808**, and an allowed list tab **810**. The filter logs tab **806** may be in a selected state, and the main screen **804** may include a blocked (or "masked") messages button **812**, a blocked (or "masked") calls button **814**, and a display area **816**. The title bar **802** may include a help button **818**. It should be noted that call and message data may not be actually blocked, but may instead be received by the smartphone **600** and masked or hidden. It may be certain notifications of call and message data that are, in a sense, blocked.

Upon selecting the masked messages button **802** for the first time, or upon selecting the masked calls button **804** for the first time, a set password activity may start. Otherwise, upon selecting the masked messages button **802**, or upon selecting the masked calls button **804**, a password for logs activity may start.

In the set password activity, the user may enter a password, confirm that password and press an OK button. The password may then be stored in the password table in the database. The password may be encrypted using a password encryption activity before it is stored in the database.

In the password for logs activity, a password screen may be displayed. FIG. **9** is a schematic representation of an exemplary password screen **900**. The password screen **900** may be displayed with the title bar **802**, the filter logs tab **806**, the masked list tab **808**, and the allowed list tab **810**. The password screen **900** may include an input field **902** for receiving a password from a user. The password screen **900** may further include an OK button **904** and a cancel button **906**. When a user enters a password into the input field **902** and selects the OK button **904**, the entered password may be checked against the encrypted password stored in the database. The password in the database may be decrypted before comparing it with the password entered by the user. If the passwords match, a messages from database activity may be started (if the masked messages button **812** was selected) or a calls from database activity may be started (if the masked calls button **814** was selected). It should be noted that two levels of password protection have now been discussed: (1) during the launch of the temporal incoming communication notification management app, and (2) during the password for logs activity. These passwords may be the same or different.

In the messages from database activity, a masked messages screen may be displayed. FIG. **10** is a schematic representation of an exemplary masked messages screen. The masked messages screen may include a list of both unread text messages (i.e., new text messages) and read text messages. The text messages may include SMS messages. As discussed an another exemplary embodiment below, the text messages may include MMS messages. The principles and spirit of the invention may be implemented for masking other types of communications (e.g., other picture types, video types, etc.) that are now known or later developed. Upon selecting a text message, the text message may be retrieved from the messages received table of the database and the user may read the entire contents of that text message and may respond thereto.

In the calls from database activity, a masked calls screen may be displayed. FIG. **11** is a schematic representation of an exemplary masked calls screen. The masked calls screen may include a list of the phone numbers (or data associated therewith such as names and timestamps). The phone numbers (or data associated therewith such as names and timestamps), may be retrieved from the calls received table of the database. Alternatively, upon selecting a phone number (or data associated therewith such as a name), details of the respective number (e.g., a timestamp) may be retrieved from the database and displayed.

Upon selecting the masked list tab **808**, a masked contacts activity may start. In the masked contacts activity, a masked contacts screen may be displayed. FIG. **12** is a schematic representation of an exemplary masked contacts screen **1200**. The masked contacts screen **1200** may be displayed with the title bar **802**, the filter logs tab **806**, the masked list tab **808**, and the allowed list tab **810**. The masked contacts screen **1200** may include a list of phone numbers **1202** that may be temporally masked from visual display of messages, calls, or both messages and calls. The phone numbers **1202** may be stored in the masked list table in the database. The masked contacts activity may retrieve all of the phone numbers **1202** stored in the masked list table of the database and display the phone numbers **1202**. For each phone number **1202**, the masked contacts screen **1200** may further include a text mask button **1204**, a call mask button **1206**, and a select button **1208**. Text mask buttons **1204** and call mask buttons **1206** may be red or green in color. The select button may contain a green checkmark if selected, or a faded checkmark if not selected.

If a text mask button **1204** is green, notification of incoming text messages from that phone number **1202** may occur according to a default notification routine of the smart phone. Similarly, if a phone mask button **1206** is green, notification of incoming phone calls from that phone number **1202** may occur according to a default notification routine.

If a text mask button **1204** is red, during a specified period, notification of text messages from that phone number **1202** may occur according to a password-protected masked notification routine. Similarly, if a mask block button **1206** is red, during a specified period, notification of phone calls from that phone number **1202** may occur according to a password-protected masked notification routine.

A sms receiver activity and a call receiver activity may run to compare the phone number phone **1202** and time of an

incoming phone call or an incoming text message against the allowed list and the masked list. Depending on the result of such comparison, notification of the text message or phone call from the phone number **1202** may occur according to either the default notification routine or the password-protected masked notification routine. The time of the incoming phone call or incoming text message may include a calendar date.

A default notification routine may include immediately displaying incoming phone call or incoming text message information on the display of the smart phone and adding an indication of the incoming phone call or incoming text message to a default phone log or message log of the smart phone.

The password-protected masked notification routine of the smart phone may include adding an indication of the incoming phone call or incoming text message information to a password-protected phone log or message log of the smart phone and may not include immediately displaying the incoming phone call or incoming text message information on the display of the smart phone, and further may not include adding an indication of the incoming phone call or adding the incoming text message to a default phone log or message log of the smart phone. The password-protected masked notification routine of the smartphone may further not include audible indication of the incoming phone call or incoming text message (e.g., the phone may not ring or a message or call notification may not sound). The indication of the incoming phone call or incoming text message may be added as an entry to the calls received table or message received table of the database. With respect to incoming phone calls, they are not blocked from receipt, but instead are transferred to voicemail without any notification of receipt of the voicemail (e.g., tone indication if a user is currently talking on the phone). It should again be noted that data in the calls received table and in the message received table may be password protected.

For a given phone number **1202**, the text mask button **1204**, the phone mask button **1206**, or both the text mask button **1204** and call mask button **1206** may be red. In other words, a phone number may be temporally masked from visual display for incoming phone calls and incoming text messages independently. If both the text mask button **1204** and the phone mask button **1206** are green for a particular phone number, that phone number may be removed from the masked list table in the database.

Upon selecting a text mask button **1204** or a phone mask button **1206**, a set temporal mask activity may start. In the set temporal mask activity, a set temporal mask screen may be displayed. FIG. **13** is a schematic representation of an exemplary set temporal mask screen **1300**. The set temporal mask screen **1300** may include temporal mask start button **1302**, a temporal mask start date and time indicator **1304**, a temporal mask end button **1306**, a temporal mask end date and time indicator **1308**, an OK button, and a cancel button **1312**.

When the temporal mask start button **1302** is selected, the temporal mask start date and time indicator **1304** may receive a temporal mask start date and time input from the user. When the temporal mask end button **1306** is selected, the temporal mask end date and time indicator **1308** may receive a temporal mask start date and time input from the user. The temporal mask start and end time and date indicators **1304**, **1308** may indicate the starting time and ending time. During the specified period, notifications of either incoming phone calls or text messages from the phone number **1202** may occur according to the password-protected masked notification routine. If a user does not enter temporal mask start and end times and dates, notifications of either incoming phone calls or text messages from the phone number **1202** may be continuously according to the password-protected masked notification routine.

During the masked contacts activity, a user may select a menu button from a keypad of the smart phone. A list of menu items may be displayed. The list of menu items may include an add from contacts menu item, an add manually menu item, an add from call log menu item, an add from message log menu item, and a mark all/clear all menu item. The add from contacts menu item may be selected to add contacts from the smart phone's contact list to the masked list table in the database. The add manually menu item may be selected to add a contact manually to the masked list table. The add from call log menu item may be selected to add contacts from the smart phone's call log. The add from message log menu item may be selected to add contacts from the smart phone's message log. The mark all/clear all menu item may be selected to select all or deselect all contacts.

Upon selecting the add from contacts menu item, an add from contacts activity may start, and all contacts from the smart phone's contact list may be displayed. From this list of contacts, one or more contacts may be selected and added to the masked list table. Upon selection of a contact, an add from contacts dialog may be displayed. FIG. **14** is a schematic representation of an exemplary add from contacts dialog **1400**. The add from contacts dialog **1400** may include a clear checked menu item **1402**, a mark all menu item **1404**, an add to mark list menu item **1406**, and a cancel button **1408**. Upon selecting the add to mark list menu item **1406**, a temporal mask start and end date and time may be entered and the contact may be selected for inclusion in the masked list table of the database. Upon selecting the mark all list menu item **1404**, all contacts may be selected for inclusion in the masked list table of the database. Upon selecting the clear checked menu item **1402**, the contact may be deselected for inclusion in the masked list table of the database.

Upon selecting the add manually menu item, an add manually activity may start. During the add manually activity, a user may enter a number manually and a temporal mask start and end date and time may be entered that will be added to the masked list table of the database.

Upon selecting the add from call log menu item, an add from call log activity may start, and all contacts from the smart phone's call log may be displayed. From this list of contacts, one or more contacts may be selected and added to the masked list table similarly to contacts being selected and added during the add from contacts activity.

Upon selecting an add from message log menu item, an add from message log activity may start, and all contacts from the smart phone's message log may be displayed. From this list of contacts, one or more contacts may be selected and added to the masked list table similarly to contacts being selected and added during the add from contacts activity.

Upon selecting the allowed list tab **810**, an allowed list activity may start. In the allowed list activity, an allowed contacts screen may be displayed. FIG. **15** is a schematic representation of an exemplary allowed contacts screen **1500**. The allowed contacts screen **1500** may be displayed with the title bar **802**, the filter logs tab **806**, the masked list tab **808**, and the allowed list tab **810**. The allowed contacts screen **1500** may include a list of phone numbers **1502** that may not be temporally masked from receiving either messages or calls. A number is an allowed number if it is not included in the masked list table of the database. Each phone number **1502** in the allowed list table of the database is checked against the masked list table of the database. If a phone number is found on the masked list table of the database, it

may not be included on the list of phone numbers that may not be temporally masked from receiving either messages or calls. For each phone number **1502**, the allowed contacts screen **1500** may include a select button **1504**. The select button **1504** may contain a green checkmark if selected, or a faded checkmark if not selected.

Upon selecting a select button **1504**, a modify allowed dialog may be displayed. FIG. **16** is a schematic representation of an exemplary modify allowed dialog **1600**. The modify allowed dialog **1600** may include a move marked to masked list menu item **1602**, a clear all menu item **1604**, and a cancel button **1606**. Upon selecting the move marked to masked list menu item **1602**, the selected phone number may be removed from the allowed list table and added to the masked list table and may no longer be displayed on the allowed contacts screen **1500**. Upon selecting the clear all menu item, all select buttons **1504** for all phone numbers **1502** displayed on the allowed contacts screen **1500** may be marked not selected (e.g., show a faded check mark).

During the allowed contacts activity, a user may select a menu button from a keypad (i.e., a user interface) of the smart phone. A list of menu items may be displayed. The list of menu items may include an add from contacts menu item, an add from call log menu item, an add from message log menu item, and a mark all/clear all menu item. The add from contacts menu item may be selected to add contacts from the smart phone's contact list to the allowed list table in the database. The add from call log menu item may be selected to add contacts from the smart phone's call log. The add from message log menu item may be selected to add contacts from the smart phone's message log. The mark all/clear all menu item may be selected to select all or deselect all contacts.

Upon selecting the add from contacts menu item, an add from contacts activity may start, and all contacts from the smart phone's contact list may be displayed. From this list of contacts, one or more contacts may be selected and added to the allowed list table.

Upon selecting the add from call log menu item, an add from call log activity may start, and all contacts from the smart phone's call log may be displayed. From this list of contacts, one or more contacts may be selected and added to the allowed list table similarly to contacts being selected and added during the add from contacts activity.

Upon selecting an add from message log menu item, an add from message log activity may start, and all contacts from the smart phone's message log may be displayed. From this list of contacts, one or more contacts may be selected and added to the allowed list table similarly to contacts being selected and added during the add from contacts activity.

Upon selecting the help button **818**, a show help activity may be launched, and a help dialog may be displayed. The contents of the help dialog may vary depending on an activity that is active when the show help activity is launched.

FIGS. **17-25** are schematic representations of a temporal incoming communication notification management app according to another exemplary embodiment. Certain elements may be similar to the above exemplary embodiment and a discussion thereof is omitted in the interest clarity. Instead, only some similar elements are discussed along with certain differences. In this exemplary embodiment, temporal time periods may be managed through the use of profiles.

FIG. **17** is a schematic representation of an exemplary masked contact screen **1700** that may be displayed during a masked contacts activity. The masked contacts screen **1700** may be displayed with a title bar, a filter logs tab, the masked list tab, an allowed list tab, and further, with a profile list tab **1710**. The masked contacts screen **1700** may include a list of phone numbers **1702** that may be temporally masked from receiving messages, calls, or both messages and calls. The phone numbers **1702** may be stored in a masked list table in a database. The masked contacts activity may retrieve, for all active profiles, all of the phone numbers **1702** stored in the masked list table of the database and display the phone numbers **1702**. For each phone number **1702**, the masked contacts screen **1700** may further include a text mask button **1704**, a call mask button **1706**, and a select button **1708**. text mask buttons **1704** and call mask buttons **1706** may be red or green in color. The select button **1708** may contain a green checkmark if selected, or a faded checkmark if not selected.

If a text mask button **1704** is green, notification of incoming text messages from that phone number **1702** may occur according to a default notification routine of the smart phone. Similarly, if a phone mask button **1706** is green, notification of incoming phone calls from that phone number **1702** may occur according to a default notification routine.

If a text mask button **1704** is red, during a specified period, notification of text messages from that phone number **1702** may occur according to a password-protected masked notification routine. Similarly, if a phone mask button **1706** is red, during a specified period, notification of phone calls from that phone number **1702** may occur according to a password-protected masked notification routine.

For a given phone number **1702**, the text mask button **1704**, the phone mask button **1706**, or both the text mask button **1704** and call mask button **1706** may be red. In other words, a phone number may be temporally blocked for incoming phone calls and incoming text messages independently. If both the text mask button **1704** and the phone mask button **1706** are changed to green for a particular phone number, that phone number may be removed from the masked list table in the database. FIG. **18** is a schematic representation of a delete confirmation dialog **1800** that may displayed when both the text mask button **1704** and the phone mask button **1706** are both changed to green. The delete confirmation dialog **1800** includes a yes button **1802** and a no button **1804**. If the yes button **1802** is selected, the contact is removed from the masked list table in the database.

Upon selecting a single phone number **1702**, a text mask button **1704**, or a phone mask button **1706**, a set single number block dialog may be displayed for the selected phone number. FIG. **19** is a schematic representation of an exemplary set single number mask dialog **1900**. The set single number mask dialog **1900** may include a delete from masked list menu item **1902**, a mask message menu item **1904**, a mask call menu item **1906**, a mask both menu item **1908**, and a cancel button **1910**. Upon selecting the delete from masked list menu item **1902**, the phone number **1702** may be removed from the masked list table of the database. Upon selecting the mask message menu item **1904** or the mask call menu item **1906**, the selected phone number **1702** may be added or remain on the masked list table indicating either text messages or phone calls, respectively, should be according to the password-protected masked notification routine. Upon selecting the mask both menu item **1908**, the phone number **1702** may be added or remain on the masked list table indicating both text messages and phone calls should be according to the password protected masked notification routine. The text mask button **1704** and phone mask button **1706** for the selected phone number may be updated accordingly (displayed in green or red according to the user's selection).

Upon selecting multiple phone numbers **1702** using select buttons **1708**, a set multiple numbers mask dialog may be displayed for the selected phone numbers. FIG. **20** is a schematic representation of an exemplary set multiple numbers

mask dialog **2000**. The set multiple numbers block dialog **2000** may include a delete marked from masked list menu item **2002**, a mask messages for marked menu item **2004**, a mask call for marked menu item **2006**, a mask both for marked menu item **2008**, and a cancel button **2010**. Upon selecting the delete marked from masked list menu item **2002**, the selected phone numbers **1702** may be removed from the masked list table of the database. Upon selecting the mask message menu item **2004** or the mask call menu item **2006**, the selected phone numbers **1702** may be added or remain on the masked list table indicating either text messages or phone calls, respectively, should be according to the password-protected masked notification routine. Upon selecting the mask both for marked menu item **2008**, the selected phone number **1702** may be added or remain on the masked list table indicating both text messages and phone calls should be according to the password protected masked notification routine. The text mask button **1704** and phone mask button **1706** for each selected phone number **1702** may be updated accordingly (displayed in green or red according to the user's selection).

During the masked contacts activity, a user may select a menu button from a keypad of the smart phone. A list of menu items may be displayed. FIG. **21** is a schematic representation of an exemplary list of menu items. The list of menu items may include an add from contacts menu item **2102**, an add manually menu item **2104**, an add from call log menu item **2106**, an add from message log menu item **2108**, and a mark all menu item **2110**. The add from contacts menu item **2102** may be selected to add contacts from the smart phone's contact list to the masked list table in the database. The add manually menu item **2104** may be selected to add a contact manually to the masked list table. The add from call log menu item **2106** may be selected to add contacts from the smart phone's call log. The add from message log menu item **2108** may be selected to add contacts from the smart phone's message log. The mark all menu item **2110** may be selected to select all or deselect all contacts.

As noted above, the present embodiment may include a profile list tab **1710**. Upon selecting the profile list tab **1710**, a profile list screen may be displayed. FIG. **22** is a schematic representation of an exemplary profile list screen **2200**. The profile list screen **2200** may be displayed with the title bar, the filter logs tab, the masked list tab, the allowed list tab, and the profile list tab. However, upon selecting the menu button of the keypad of the smart phone, a list of menu items may be displayed. As shown in FIG. **22**, the list of menu items may be displayed over the filter logs tab, the masked list tab, the allowed list tab, and the profile list tab. The list of menu items may include a create profile menu item **2202** and a mark all menu item **2204**.

The profile list screen **2200** may include a default profile **2206**. The default profile **2206** may not be deleted. A user may create any number of additional profiles **2208** beyond the default profile **2206**. A user may create an additional profile **2208** by selecting the create profile menu item **2202**. The default profile **2206** may only be active when there is no other active additional profile **2208**. However, multiple additional profiles **2208** may be active at the same time. Phone numbers **1702** may be added to one or more of the default profile **2206** and any additional profiles **2208**.

Each additional profile **2208** may include a profile identifier **2210**, a select button **2212**, and an ON/OFF button **2214**. The select button may contain a green checkmark if selected, or a faded checkmark if not selected. If the additional profile **2208** is not activated, the ON/OFF button **2214** may display the text "OFF". As shown in FIG. **23**, if the ON/OFF button **2214** is then selected, the additional profile **2208** may be activated and the ON/OFF button **2214** may display the text "ON", and the background of the active profiles may be highlighted. When one or more additional profiles **2208** are activated, the default profile **2206** may be inactive. As shown in FIG. **23**, additional profiles **2208** unnamed **1** and unnamed **3** are active while default profile **2206** and additional profile **2208** unnamed **2** are inactive.

Additional profiles **2208** may be deleted and settings of default profile **2206** and any additional profiles **2208** may be may reviewed by selecting on the profile and selecting a desired option from a dialog that may appear after selecting the profile.

Upon selecting the create profile menu item **2202**, an add profile screen may be displayed. FIG. **24** is a schematic representation of an exemplary add profile screen **2400**. The add profile screen **2400** may include a name input field **2402**, a start button **2404**, an end button **2406**, an OK button **2408**, and a cancel button **2410**. When the start button **2404** is selected, a profile start date and time may be entered. When the end button **2406** is selected, a profile stop date and time may be entered. A user may select the OK button **2408** to confirm the selections.

Upon selecting the default profile **2206** or any additional profile **2208**, a settings screen may be displayed. FIG. **25** is a schematic representation of an exemplary settings screen **2500**. The settings screen **2500** may include a name field **2502**, a start button **2504**, an end button **2506**, an OK button **2508**, a cancel button **2510**, an activation button **2516**, a start date and time indicator **2512** and an end date and time indicator **2514**. When the activation button **2516** is selected, the profile may be activated, and filtering may occur during the specified period. The start and end date and time indicators **2512**, **2514** may indicate the starting and ending time during which period calls associated with the particular profile (either on the masked list or the allowed list) may be filtered.

FIGS. **26-30** are schematic representations of a temporal incoming communication notification management app according to another exemplary embodiment. Certain elements may be similar to the above exemplary embodiments and a discussion thereof is omitted in the interest clarity. Instead, only some similar elements are discussed along with certain differences. In this exemplary embodiment, SMS and MMS messages may be masked, and temporal time periods may be managed through the use of profiles.

During a launch of the temporal incoming communication notification management app, after prompting a user for a password, a profile list screen may be displayed. FIG. **26** is a schematic representation of an exemplary profile list screen **2600**. The profile list screen **2600** may be displayed with a title bar, a profile tab **2602**, a settings tab **2603**, and a help tab **2604**. The profile list screen **2600** may include a default profile **2206**. The default profile **2206** may not be deleted. The profile list screen **2600** may include additional profiles **2208** beyond the default profile **2206**. Once a user selects either the default profile **2606** or one of the additional profiles **2208**, a corresponding main activity may start. In the main activity, a main user interface may be displayed. FIG. **27** is a schematic representation of a main user interface **2700**. The main user interface **2700** may include a title bar **2702**, a main screen **2704**, a filter logs tab **2706**, a masked list tab **2708**, and an allowed list tab **2710**. The filter logs tab **2706** may be in a selected state, and the main screen **2704** may include a masked SMS button **2712**, a masked MMS button **2713**, a masked calls button **2714**, and a display area **2716**. The title bar **2702** may include a help button **2718**.

Upon selecting the masked SMS button **2712**, the masked MMS button **2713**, or the masked calls button **2714** for the first time, a set password activity may start. Otherwise, upon selecting the masked SMS button **2712**, the masked MMS button **2713**, or the masked calls button **2714**, a password for logs activity may start. If passwords match during the password for logs activity, a messages from database activity may be started (if the masked SMS button **2712** was selected) or a MMS from database activity may be started (if the masked MMS button **2713** was selected). In the messages from database activity and in the MMS from database activity, a masked messages screen may be displayed displaying either masked SMS messages, masked MMS messages, or both masked SMS and MMS messages. In an alternative exemplary embodiment, single messages from database activity may be used for both masked SMS and MMS messages. It should be noted that SMS messages, MMS messages, and phone calls may be temporally authorized independently of one another for a particular phone number.

As noted above, the present exemplary embodiment includes a profile tab **2602**. Upon selecting the profile tab **2602**, the profile list screen **2600** may be displayed. Upon selecting a create profile menu item (not shown), an add profile screen may be displayed. FIG. **28** is a schematic representation of an exemplary add profile screen **2800**. The add profile screen **2800** may include a name input field **2802**, a start time button **2804**, an end time button **2806**, day select buttons **2807**, an OK button **2808**, a cancel button **2810**, and a block unknown numbers select button **2812**. Start and end times and days may be displayed. When the start time button **2804** is selected, a profile start time may be entered. When the end time button **2806** is selected, a profile stop time may be entered. Certain days of the week during which the profile start and stop times (i.e., the profile) should be active may be selected using the day select buttons **2807**. A user may choose to mask unknown numbers during the profile active time by selecting the block unknown numbers select button **2812**. The principles and spirit of the invention may be implemented by providing additional screening filters. For example, calls from a certain number during a certain time period may be screened or added to the masked list. Calls during a certain time may be screened or added to the list. International calls, calls from a particular country, calls from a particular area code, or caller ID blocked calls may each be screened or added to the masked list. Similarly, texts or pictures from or linking to a particular domain or IP address may be screened or added to the masked list. A user may select the OK button **2408** to confirm the selections.

From the profile list screen **2600**, upon selecting the default profile **2606** or any additional profile **2608**, a profile settings screen may be displayed. FIG. **29** is a schematic representation of an exemplary profile settings screen **2900**. The profile settings screen **2900** may include a name field **2902**, a start time button **2904**, an end time button **2906**, day select buttons **2907**, an OK button **2908**, a cancel button **2910**, a block unknown numbers select button **2912**, and an activation button **2916**. When the activation button **2916** is selected, the profile may be activated, and filtering may occur during the specified period. Start and end times and days may be displayed. When the profile is active and during the specified times and days, text messages or calls associated with the particular profile (either on the masked list or the allowed list or unknown if applicable) may be filtered.

As noted above, the present exemplary embodiment includes a settings tab **2603**. Upon selecting the settings tab **2603**, an app settings screen may be displayed. FIG. **30** is a schematic representation of an exemplary app settings screen **3000**. The app settings screen **3000** may include a with profile feature select button **3002**, a use **12**-hour format button **3004**, and a use multimedia feature button **3006**. If the with profile feature select button is selected, multiple profiles may be enabled. If the use **12**-hour format button **3004** is select button is selected, times in the app may be in a **12** hour format (as opposed to a **24** hour format). If the use multimedia feature select button **3006** is selected, then MMS messages may be filtered.

The operation of the exemplary embodiments is now described with reference to FIG. **31** which is a schematic representation of an exemplary method **3100** of a smartphone. In operation **3102**, the method **3100** may begin. In operation **3104**, indications of temporally authorized or unauthorized phone numbers may be received into a user interface of the smart phone. In operation **3106**, indications of time periods during which the temporally authorized or unauthorized phone numbers are temporally authorized or unauthorized may be received into the user interface of the smart phone. In operation **3108**, a list of temporally authorized or unauthorized phone numbers and time periods may be generated based on said received indications of temporally authorized or unauthorized phone numbers and time periods. In operation **3110**, the list of temporally authorized or unauthorized phone numbers and time periods may be stored in the memory of the smart phone.

In operation **3112**, phone, phone numbers and times of incoming phone calls and incoming text messages may be compared against the list of temporally authorized or unauthorized phone numbers and time periods. If the a number of an incoming phone call or incoming text message and is temporally allowed, in operation **3114**, notification of the incoming phone call or incoming text messages may be according to a default notification routine of the smart phone. If the number of the incoming phone call or incoming text message is not temporally allowed, in operation **3116**, notification of the incoming phone call or incoming text according to the default notification routine may not occur and a notification of the incoming call or incoming text according to a password-protected masked notification routine of the smart phone may be generated. The default notification routine of the smart phone includes immediately displaying incoming phone call or incoming text message information on the display of the smart phone and adding an indication of the incoming phone call or incoming text message to a default phone log or message log of the smart phone. The password-protected masked notification routine of the smart phone includes adding an indication of the incoming phone call or incoming text message to a password-protected phone log or message log of the smart phone and precludes immediately displaying the incoming phone call or incoming text message information on the display of the smart phone, and further does not include adding an indication of the incoming phone call or incoming text message to a default phone log or message log of the smart phone. In operation **3118**, the method **3100** may end.

Embodiments of the present invention allow for temporal incoming communication management. Accordingly, certain incoming phone calls and text messages may not be handled according to a default notification routine of a smart phone, but may be discretely handled according to a password protected masked notification routine. This may provide a user increased privacy, and increased control over the user's time and communications. In some instances, this may eliminate a user's need for multiple phones (e.g., separate work and personal phones).

The foregoing description discloses only exemplary embodiments of the invention. Modifications of the above-disclosed embodiments of the present invention of which fall within the scope of the invention will be readily apparent to those of ordinary skill in the art. For example, although operations are described with reference to particular activities, the operations could be a part of more or fewer or different activities. Further, as noted above, the principles and spirit of the invention may be implemented using alternatives to, for example, activities. Further, specific interfaces and the like are described for clarity. For example, although the use of select buttons containing green check marks has been described, alternative selectors may be used.

Accordingly, although exemplary embodiments of the present invention have been shown and described, it would be appreciated by those skilled in the art that changes may be made in these embodiments without departing from the principles and spirit of the invention, the scope of which is defined in the claims and their equivalents.

What is claimed is:

1. A method of a smart phone including a processor, a memory coupled to the processor, and a display, the method comprising:

receiving into a user interface of the smart phone, indications of temporally authorized or unauthorized phone numbers;

receiving into the user interface of the smart phone, indications of time periods during which the temporally authorized or unauthorized phone numbers are temporally authorized or unauthorized;

generating a list of temporally authorized or unauthorized phone numbers and time periods based on said received indications of temporally authorized or unauthorized phone numbers and time periods;

storing the list of temporally authorized or unauthorized phone numbers and time periods in the memory of the smart phone;

comparing, using instructions executed by the processor of the smart phone, phone numbers and times of incoming phone calls and incoming text messages against the list of temporally authorized or unauthorized phone numbers and time periods;

if a number of an incoming phone call or incoming text message and is temporally allowed, allowing for notification of the incoming phone call or incoming text messages according to a default notification routine of the smart phone; and

if the number of the incoming phone call or incoming text message is not temporally allowed, not allowing for notification of the incoming phone call or incoming text according to the normal notification routine and generating a notification of the incoming call or incoming text according to a password-protected masked notification routine of the smart phone,

wherein the default notification routine of the smart phone includes immediately displaying incoming phone call or incoming text message information on the display of the smart phone and adding an indication of the incoming phone call or incoming text message to a default phone log or message log of the smart phone, and

wherein the password-protected masked notification routine of the smart phone includes adding an indication of the incoming phone call or incoming text message to a password-protected phone log or message log of the smart phone and precludes immediately displaying the incoming phone call or incoming text message information on the display of the smart phone, and further precludes adding an indication of the incoming phone call or incoming text message to a default phone log or message log of the smart phone.

2. The method of claim **1**, wherein the times of incoming phone calls and incoming text messages includes a calendar date.

3. The method of claim **1**, wherein a temporally authorized or unauthorized phone number is temporally authorized or unauthorized for incoming phone calls and incoming text messages independently.

4. The method of claim **1**, further comprising:

storing an encrypted password;

receiving an entered password; and

if the number of the incoming phone call or incoming text message is not temporally allowed, displaying the indication of the incoming phone call or incoming text message only if the encrypted password and entered password match.

5. The method of claim **4**, further comprising:

storing a second encrypted password;

receiving a second entered password; and

if the number of the incoming phone call or incoming text message is not temporally allowed, displaying the indication of the incoming phone call or incoming text message only if the second encrypted password and second entered password match.

6. The method of claim **1**, wherein the receiving operations, generating operation, storing operation, comparing operation, and allowing for notification operation are controlled by a smart phone app.

7. The method of claim **1**, wherein the receiving operations, generating operation, storing operation, comparing operation, and allowing for notification operation are controlled by a smart phone operating system.

8. The method of claim **1**, wherein the incoming text messages include SMS messages.

9. The method of claim **1**, wherein the incoming text messages include MMS messages.

10. The method of claim **1**, wherein the password-protected masked notification routine of the smartphone further precludes audible indication of the incoming phone call or incoming text message.

11. A non-transitory smart phone computer app having instructions that when received from memory into a processor cause the smart phone to implement a method, the method comprising:

receiving into a user interface of the smart phone, indications of temporally authorized or unauthorized phone numbers;

receiving into the user interface of the smart phone, indications of time periods during which the temporally authorized or unauthorized phone numbers are temporally authorized or unauthorized;

generating a list of temporally authorized or unauthorized phone numbers and time periods based on said received indications of temporally authorized or unauthorized phone numbers and time periods;

storing the list of temporally authorized or unauthorized phone numbers and time periods in the memory of the smart phone;

comparing, using instructions executed by the processor of the smart phone, phone numbers and times of incoming phone calls and incoming text messages against the list of temporally authorized or unauthorized phone numbers and time periods;

if the a number of an incoming phone call or incoming text message and is temporally allowed, allowing for notifi-

cation of the incoming phone call or incoming text messages according to a default notification routine of the smart phone; and

if the number of the incoming phone call or incoming text message is not temporally allowed, not allowing for notification of the incoming phone call or incoming text according to the normal notification routine and generating a notification of the incoming call or incoming text according to a password-protected masked notification routine of the smart phone,

wherein the default notification routine of the smart phone includes immediately displaying incoming phone call or incoming text message information on the display of the smart phone and adding an indication of the incoming phone call or incoming text message to a default phone log or message log of the smart phone, and

wherein the password-protected masked notification routine of the smart phone includes adding an indication of the incoming phone call or incoming text message to a password-protected phone log or message log of the smart phone and precludes immediately displaying the incoming phone call or incoming text message information on the display of the smart phone, and further precludes adding an indication of the incoming phone call or incoming text message to a default phone log or message log of the smart phone.

12. The app of claim **11**, wherein the times of incoming phone calls and incoming text messages includes a calendar date.

13. The app of claim **11**, wherein a temporally authorized or unauthorized phone number is temporally authorized or unauthorized for incoming phone calls and incoming text messages independently.

14. The app of claim **11**, where in the method further comprises:

storing an encrypted password;

receiving an entered password; and

if the number of the incoming phone call or incoming text message is not temporally allowed, displaying the indication of the incoming phone call or incoming text message only if the encrypted password and entered password match.

15. The app of claim **14**, wherein the method further comprises:

storing a second encrypted password;

receiving a second entered password; and

if the number of the incoming phone call or incoming text message is not temporally allowed, displaying the indication of the incoming phone call or incoming text message only if the second encrypted password and second entered password match.

16. The app of claim **11**, wherein the app is installed on the smartphone.

17. The app of claim **11**, wherein the app is integrated as part of an operating system of the smartphone.

18. The app of claim **11**, wherein the incoming text messages include SMS messages.

19. The app of claim **11**, wherein the incoming text messages include MMS messages.

20. The app of claim **11**, wherein the password-protected masked notification routine of the smartphone further precludes audible indication of the incoming phone call or incoming text message.

* * * * *

Exhibit B

to

Complaint for Patent Infringement

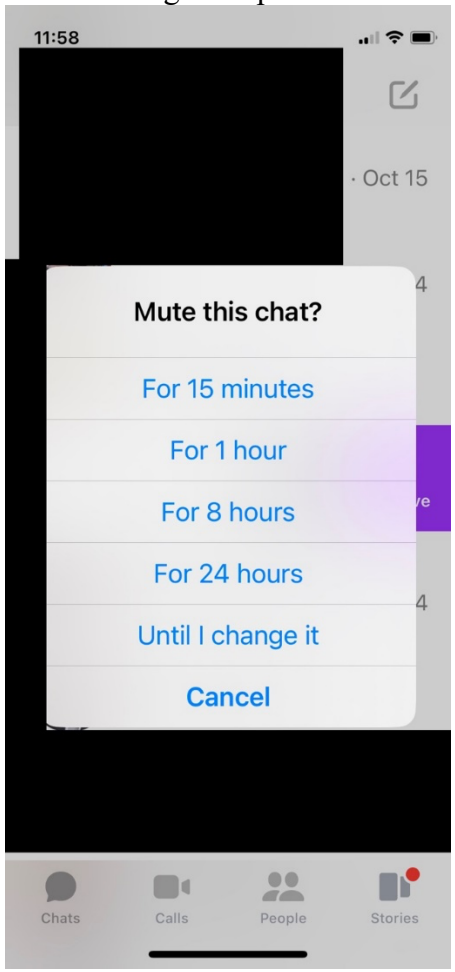
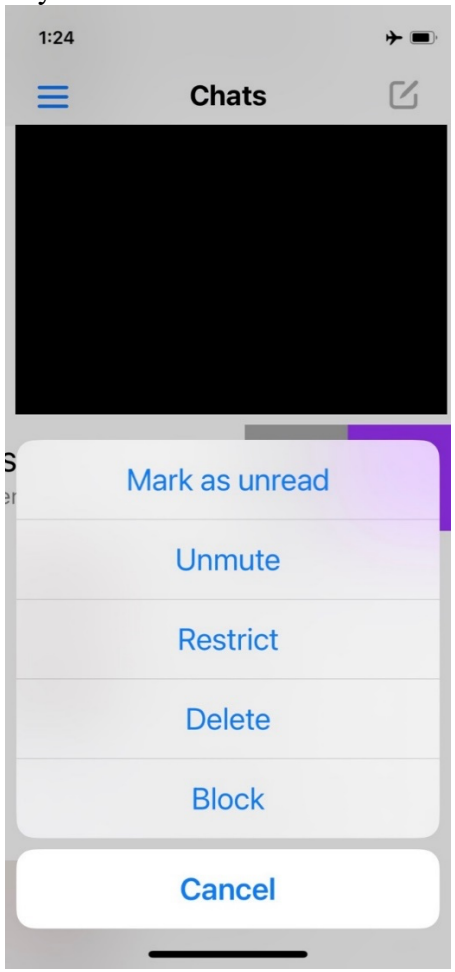
Claim Chart[1] for the '723 Patent

[1] Plaintiff provides this exemplary claim chart for the purposes of showing one basis of infringement of one of the Patents-in-suit by Defendant's Accused Products as defined in the Complaint. This exemplary claim chart addresses the Accused Products broadly based on the fact that the Accused Products infringe in the same general way. Plaintiff reserves its right to amend and fully provide its infringement arguments and evidence thereof until its Preliminary and Final Infringement Contentions are later produced according to the court's scheduling order in this case.

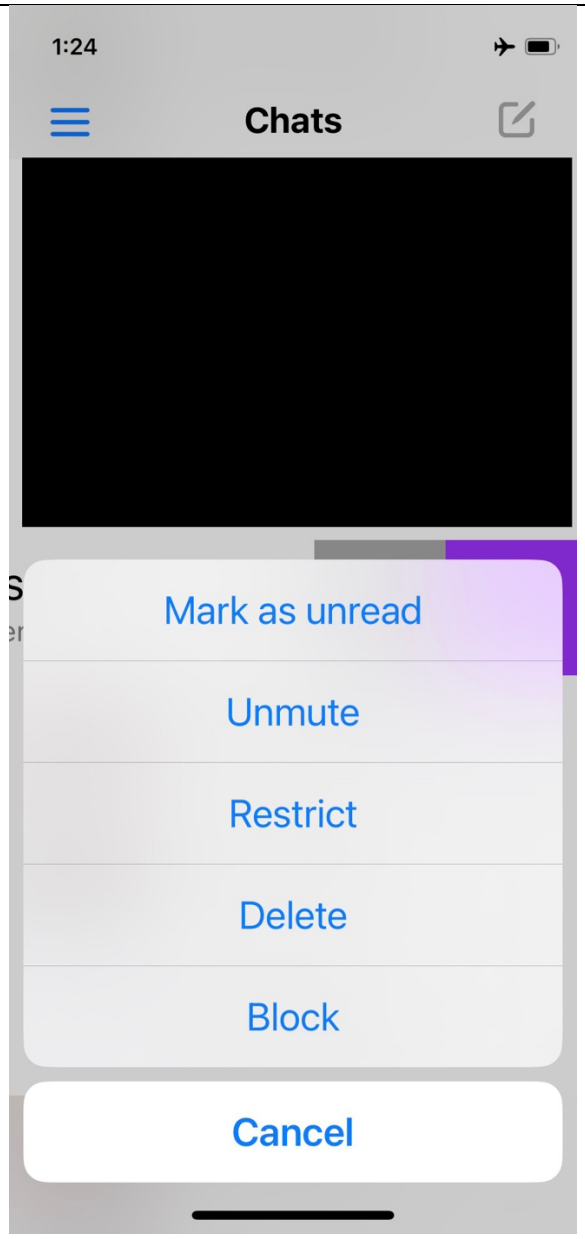
CLAIM CHART

U.S. PATENT NO. 8,855,723 – CLAIM 11

Claim 1	Corresponding Structure in Accused Systems – Meta Platforms, Inc.
[11a] A non-transitory smart phone computer app having instructions that when received from memory into a processor cause the smart phone to implement a method, the method comprising:	Meta Platforms, Inc. ("Facebook") has a messaging application called Messenger. Users on Messenger can receive messages from other users. Messages are stored in a message log that is categorized by the sender. The Messenger app is available on a wide variety of smartphones including Android devices and iPhones. **Which operating system versions support the Messenger app?** Copy link Android App Help | iPhone App Help | iPad App Help | Computer help Messenger lets you easily message friends, start a group conversation and share photos, videos and gifs. When you install the latest version of the Messenger app, you get the newest features and enhancements. **Android operating system versions that support the Messenger app:** • Version 4 (Ice Cream Sandwich) and above. **Android operating system versions that no longer support the Messenger app:** • Messenger is no longer supported on version 2.3 (Gingerbread) or older. • If you're on version 2.3, you can download Messenger Lite or Facebook Lite where available, or access your messages through facebook.com on your mobile browser. • If you're on a version older than 2.3, you can access your messages through facebook.com on your mobile browser. Learn how to update your app. **Source:** https://www.facebook.com/help/messenger-app/197039404112757

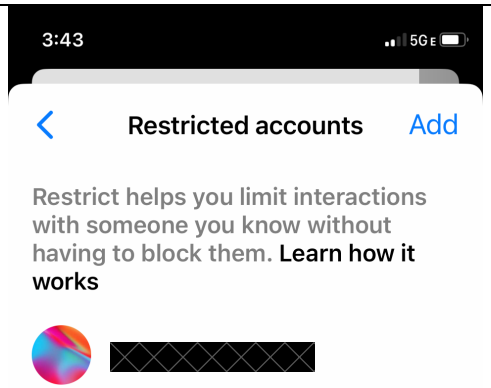
[11b] receiving into a user interface of the smart phone, indications of temporally authorized or unauthorized phone numbers;	Messenger has a muting feature for individual chats. The user can select on the interface of Messenger an option to Mute the chat. The user can mute the chat permanently or for a set period of time. Users can also choose to restrict a chat. Users on Messenger can be indexed by phone number. Phone numbers which are muted are considered temporally unauthorized and phone numbers that are unmuted are temporally authorized. *See* https://www.facebook.com/help/messenger-app/330627630326605. The following exemplifies this limitation's existence in Accused Systems:  **Example of mute chat feature on iOS for Messenger**  **Example of option to Restrict accounts**

[11c] receiving into the user interface of the smart phone, indications of time periods during which the temporally authorized or unauthorized phone numbers are temporally authorized or unauthorized;	As shown in section [11b] above, the user can select a time period when the muted user is temporally unauthorized or authorized by either muting or unmuting a chat.
[11d] generating a list of temporally authorized or unauthorized phone numbers and time periods based on said received indications of temporally authorized or unauthorized phone numbers and time periods;	After setting the list of chats that are muted or not muted, the smartphone retains a list of muted users. After turning off and turning back on the phone the muted list remains the same. This indicates that the smartphone stores a list of muted users.
[11e] storing the list of temporally authorized or unauthorized phone numbers and time periods in the memory of the smart phone;	If a user mutes a chat and then disconnects their phone from every wireless source (accomplished below by going into airplane mode) then the chat remains muted, and the user has the option to unmute the chat. This demonstrates that the list of temporally muted chats must be stored in the memory of the user's smart phone and not delivered every time the user connects to the internet. The following exemplifies this limitation's existence in Accused Systems:



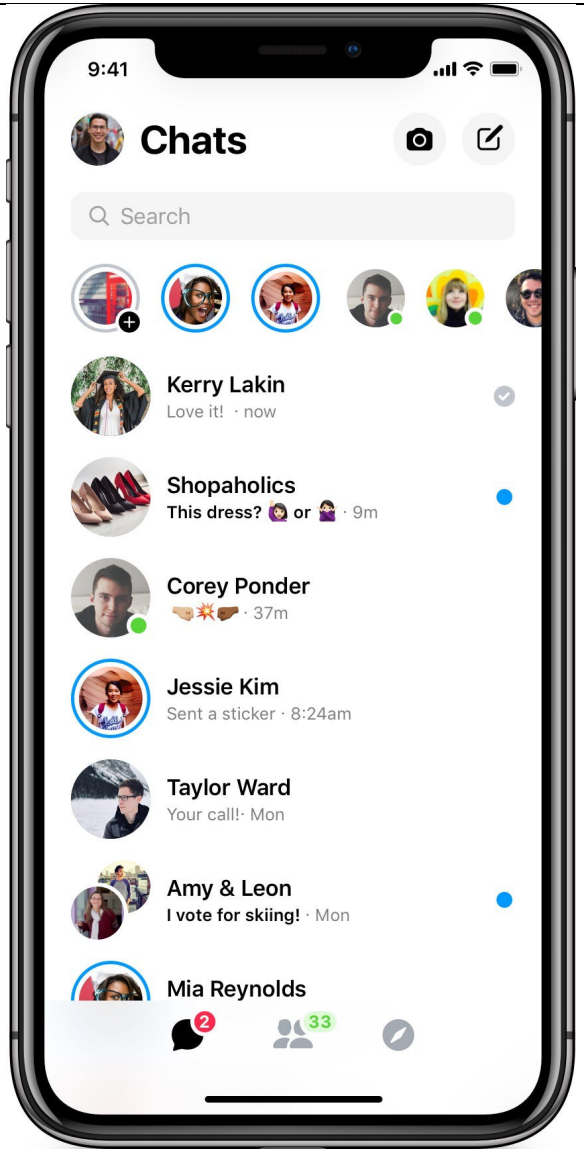
Example of how chat remains muted in airplane mode

[11f] comparing, using instructions executed by the processor of the smart phone, phone numbers and times of incoming phone calls and incoming text messages against the list of temporally authorized or unauthorized phone numbers and time periods;	Messages from muted chats are treated differently than non-muted chats on a smartphone running Messenger. Incoming messages are checked for sender and if the sender is currently listed as temporally or permanently muted then Messenger will treat the message differently than a message from a non-muted sender. *See* https://www.facebook.com/help/messenger-app/330627630326605.
[11g] if the a number of an incoming phone call or incoming text message and is temporally allowed, allowing for notification of the incoming phone call or incoming text messages according to a default notification routine of the smart phone; and	When a message comes in from a chat that is not muted, depending on Messenger settings, the user will be immediately notified of that message both by a popup on the smartphone's screen and a notification sound being played.
[11h] if the number of the incoming phone call or incoming text message is not temporally allowed, not allowing for notification of the incoming phone call or incoming text according to the normal notification routine and generating a notification of the incoming call or incoming text according to a password-protected masked notification routine of the smart phone,	If a message comes in from a Messenger chat that is muted or restricted, no notification will show on the user's phone. If a message comes in from a user that has been restricted, then that message will not be shown in the default message log of Messenger. It will instead be located in a separate section of Messenger which contains all restricted chats. This section can be password protected by the user's passcode for Messenger, or by the user's smartphone password. The following exemplifies this limitation's existence in Accused Systems:



Example of a message log from a restricted chat

[11i] wherein the default notification routine of the smart phone includes immediately displaying incoming phone call or incoming text message information on the display of the smart phone and adding an indication of the incoming phone call or incoming text message to a default phone log or message log of the smart phone, and	Below is an example of a typical message log in Messenger. Multiple different chats are indexed by the name of the sender and new incoming chats will notify the user of the smartphone and indicate the sender and sometimes the content of the message. The following exemplifies this limitation's existence in Accused Systems:



Example of Typical Messenger Log, Source:
https://www.usatoday.com/story/tech/talkingtech/2018/10/23/facebook-messenger-gets-update-promises-simplicity/1742694002/

[11j] wherein the password-protected masked notification routine of the smart phone includes adding an indication of the incoming phone call or incoming text message to a password-protected phone log or message log of the smart phone and precludes immediately displaying the incoming phone call or incoming text message information on the display of the smart phone, and further precludes adding an indication of the incoming phone call or incoming text message to a default phone log or message log of the smart phone.	Messages from muted and restricted chats will not be displayed on the home page, the lock screen, or anywhere else on the smartphone. The only location restricted chats can be accessed on the smartphone is in the restricted chat section of Messenger. These chats are not stored in the regular message log of Messenger and are separate from other chats. *See* section 11h, above.